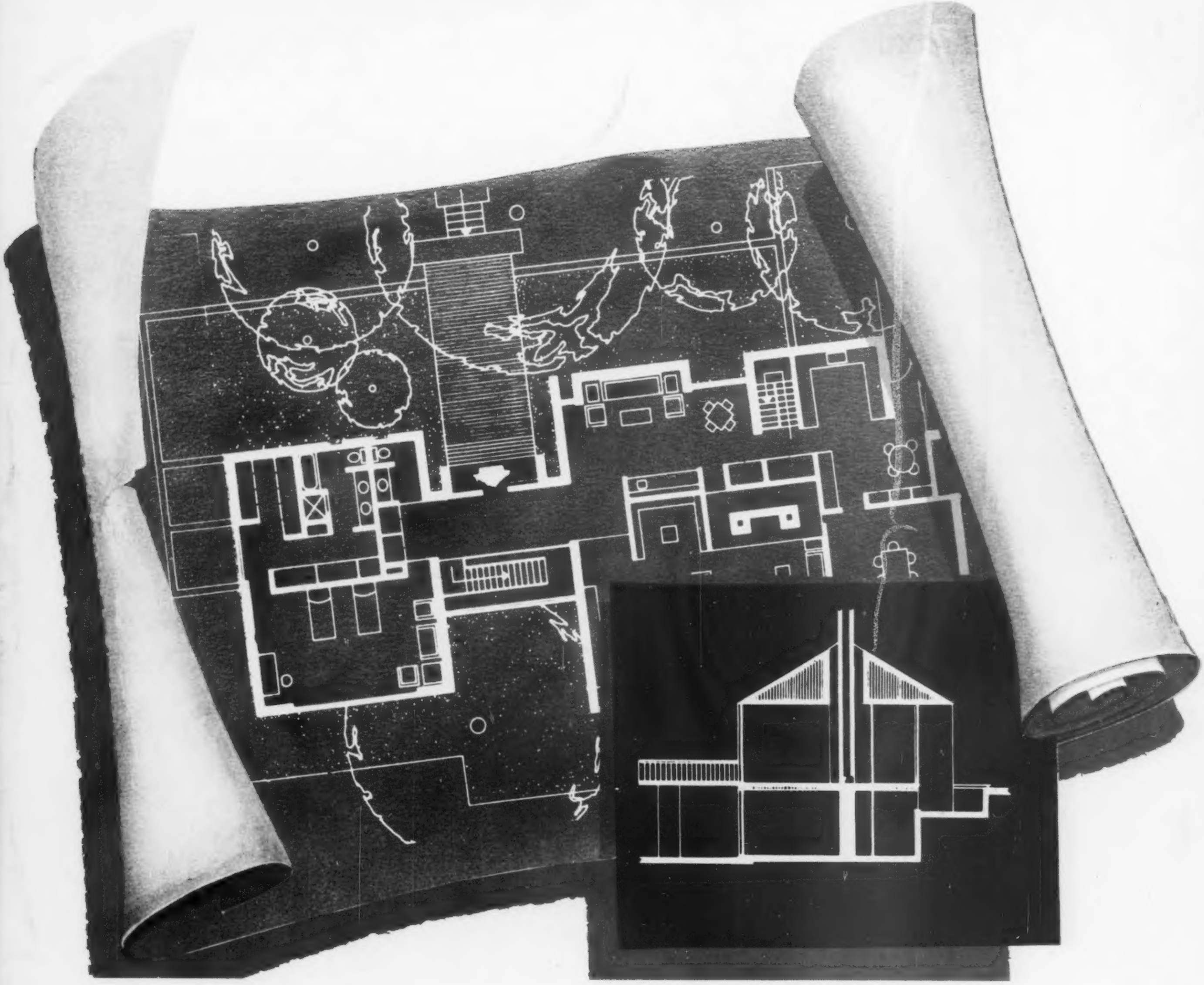
A UNITED STATES
DEPARTMENT OF
COMMERCE
PUBLICATION

Incorporating *International Commerce*

MARCH 8, 1971

Commerce Today

Coming Developments in Business and Technology



'Operation Breakthrough'— A New Blueprint For Housing

See Page 4

FROM THE SECRETARY

U.S. Seeks 'Fresh Approach' On Trade

(This column was written by Robert McLellan, Assistant Secretary of Commerce for Domestic and International Business.)

The outstanding characteristic of international business today is change, and change has given rise to new problems for the United States.

In the highly competitive world of the 1970s, several conditions prevail:

European and Japanese producers now compete strongly with our businessmen in world markets, in a widening variety of ways.

Certain American industries are increasingly hard hit by unemployment and plant closings as a result of intensified world competition.

Exporters of U.S. agricultural products compete at a heavy disadvantage in the European Community, because of unfairly restrictive aspects of the EEC's Common Agricultural Policy.

Stringent import and investment restrictions in Japan, complex trade barriers elsewhere, special trade preferences inconsistent with the GATT, and other disquieting moves, all tend to have a discriminatory effect on U.S. exports.

In seeking to adapt our trade and investment policies to these conditions, we have moved ahead in various new directions—to intensify the U.S. export expansion effort, to improve U.S. export financing, and to improve the climate for foreign investments throughout the world, among others.

But many difficult problems remain.

In recent testimony (See story on Page 16.) to the Joint Economic Committee of Congress, Secretary Stans noted that the U.S. world trading position is jeopardized by a maze of regulations, restrictions, and restraints which confront our businessmen around the world.

Faced with these inhibitions to competition, he said the 1971 outlook on our trade surplus is not very encouraging. He forecast that the growth of U.S. exports this year (10-12 percent) would be somewhat less than the growth of imports (from 12-14 percent).

The goal of U.S. trade policy today, as for the past 35 years, is the expansion of trade worldwide. We seek to reduce trade barriers, and to achieve recognition of fair and equal rules of trade for all countries, based on reciprocity and an end to discriminatory trade practices.

In his testimony, Secretary Stans reaffirmed the Nation's commitment to these progressive goals.

He also re-expressed his long-standing hope that other countries would join us in efforts to reduce or eliminate non-tariff barriers to world trade.

Recognizing that American workers and firms are confronted with new technological and competitive conditions, Secretary Stans said further, "a fresh approach to our trade policy is required."

In the long run the most helpful solution to U.S. trade problems today lies in achieving this "fresh approach," and steps are being taken in that direction.

Recently President Nixon created the White House Council on International Economic Policy, which Secretary Stans says "will provide a clear, top-level focus on international economic issues."

Later in the spring the Williams Commission will report to the President on its conclusions, after approximately a year of studying the Nation's needs in respect to global trade.

Out of these developments, realistic trade policies for the 1970s are expected—and with them we can continue our efforts as a nation to achieve our goal of greater trade with all the world.

Robert M. Lellan

Commerce Today

Vol. I, No. 11, March 8, 1971

4 Applying The Human Approach To Housing

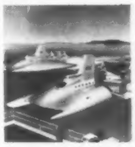
National Bureau of Standards assists HUD in "Operation Breakthrough" to solve large-scale housing production problems.

8 Census Data Help U.S. Business Pinpoint Markets Of The 1970s

A breakdown of the 1970 population count for 28 states will help the nation's business plan production and distribution.

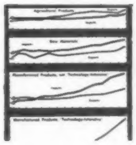
12 Maritime Research Spells Industry Profits

A research and development program seeks ways to rebuild the U.S. Merchant Marine as competitive in world trade and fulfilling defense requirements.



16 Basic Shift In Trade Is Problem Facing U.S.

Secretary Stans tells Congress the declining export surplus has deeper roots than inflation and outlines some possible solutions.



20 Domestic Business Report

Returning veterans helped in job search—USTS finds new track for U.S. travel promotion—Shipbuilding Commission reviews industry—World War II barge to fly new flag—Little change in U.S. mobility rate.

27 Science & Technology Report

'Tornado trap' to delve mystery of killer storms—Patents approves 380 anti-pollution applications—U.S. commercial whaling to end by Stans move—Mexican weather station to improve U.S. storm warning.

33 International Commerce

U.S. trade performance in 1970—Report on mid-America World Trade Conference—Swedish economy now in levelling-off period—Australia in search for new technology

2 Economic Highlights

71 New Publications

COVER—*Solutions to some of the nation's perplexing housing problems are being sought in programs such as "Operation Breakthrough" of the Department of Housing and Urban Development in which Commerce's National Bureau of Standards is playing an important role. See story Page 4.*

U.S. DEPARTMENT
OF COMMERCE

MAURICE H. STANS
Secretary

ROCCO C. SICILIANO
Under Secretary

B. R. LITTIN
Director of Public Affairs

DICK EVANS
Editor

CLARENCE M. ZENS
Associate Editor, International Commerce

RICHARD BALENTINE
Associate Editor, Science and Technology

ARTHUR McDERMOTT
Associate Editor, Domestic Business

AMERICO A. W. FAVALE
Coordinator of Graphics

Published biweekly by the U.S. Department of Commerce, Washington, D.C.

Annual subscription rate $20 ($5 additional for foreign mailing, $14.30 additional for domestic air mailing). Single copy 75 cents. Make checks or money orders payable to Superintendent of Documents and mail to Superintendent, U.S. Government Printing Office, Washington, D.C. 20402, or to any U.S. Department of Commerce Field Office.

All subscription inquiries and address changes should be sent to the Superintendent of Documents, at the above address. This is the central distribution agency for U.S. Government publications.

Contents of this publication are not copyrighted unless indicated, and if not so indicated, the articles may be reproduced in part or in full without any prior consent.

Use of funds for printing this publication approved by the Director of the Bureau of the Budget November 26, 1969.

ECONOMIC
HIGHLIGHTS

Deficit In 1972 Stimulative But Not Inflationary; Full-Employment Budget To Remain In Balance

Economic Highlights is prepared by Dr. Harold C. Passer, Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

The budget deficits in fiscal years 1971 and 1972 will stimulate the economy, but they are not inflationary because the economy is operating below full potential.

The budget will be in balance, however, when considered on a full-employment basis —just as it was the previous two fiscal years. This concept of fiscal management takes into account the effect of the economy on the Federal Budget as well as the effect of the budget on the economy.

The full-employment budget calculates what revenues and expenditures would be if the economy were at full employment. The main advantage of the full-employment budget is that it provides a guideline for setting Government revenues and expenditures so that they will serve as a balance wheel for the economy. Another advantage of the constantly-balanced, full-employment budget is that it imposes fiscal discipline. Proposals for additional spending require proposals for additional taxes.

When the economy is operating at or above its potential, deficits are inflationary. When the economy is operating below its potential, deficits are expansionary but not inflationary. Thus, aiming for a balanced budget on the full-employment basis is the proper course to follow to achieve a noninflationary, high-employment economy.

In fiscal 1962-65, the unified budget was in deficit but the full-employment budget was in surplus. In other words, if the economy had been operating at full capacity, the additional activity in the economy would have generated enough extra revenue to produce surpluses. Thus the actual deficits of these years were not inflationary and, in fact, prices were generally stable.

The situation changed after 1965 with the unified budget deficits deepening in the 1966-68 period, reaching $25 billion in 1968. The economy generally was operating at or above the full-employment level during this period and, as a result, there were budget deficits of approximately equal magnitude on the full-employment basis. These massive deficits were thus a prime source of the current inflation that began in the mid-1960s.

The unified budget ran a surplus of about $3 billion in fiscal 1969 and a deficit of about the same magnitude the following year; in 1971 and 1972, there will be deficits of approximately $18.6 billion and $11.6 billion, respectively. Over this four-year span, however, the full-employment budget shows, or will show, approximate balance.

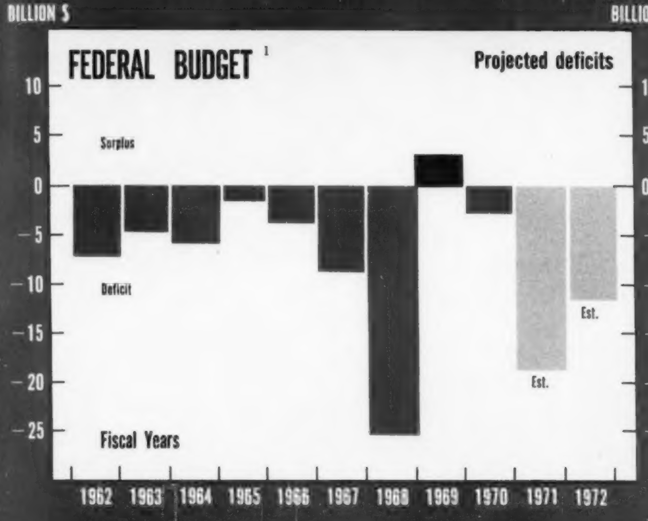
A surplus in the unified budget was appropriate at the beginning of the Nixon Administration because the economy was operating at a very high, unsustainable rate and inflation was threatening to reach the crisis stage. Now that there is slack in the economy, deficits (on a unified budget basis) are needed over the next 18 months to help bring the economy back to full employment.

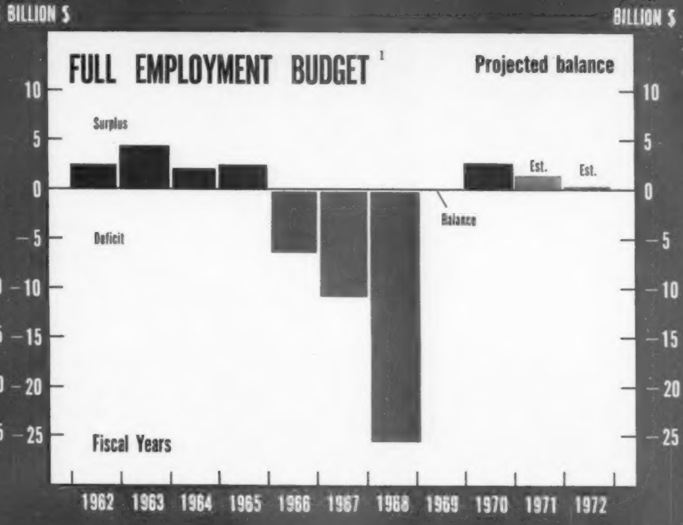
Recent economic data

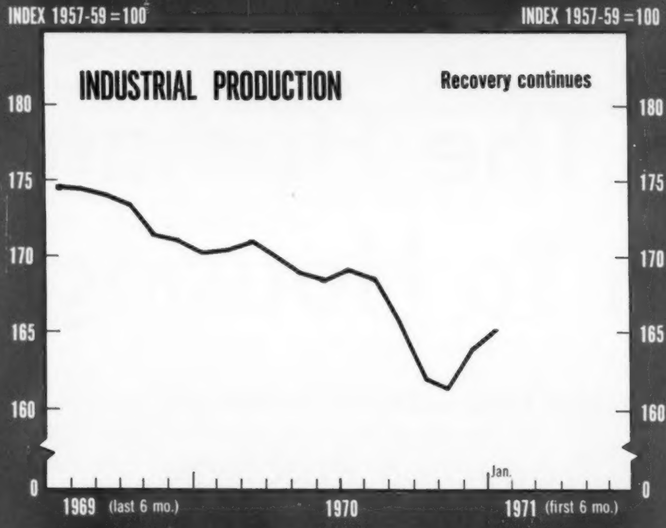
The index of industrial production continues to advance and the composite index of leading business indicators has scored three consecutive monthly gains, reflecting both recovery in autos and steel and basic strength in the economy. Autos and steel also were major factors in the recent substantial gains in factory orders for durable goods.

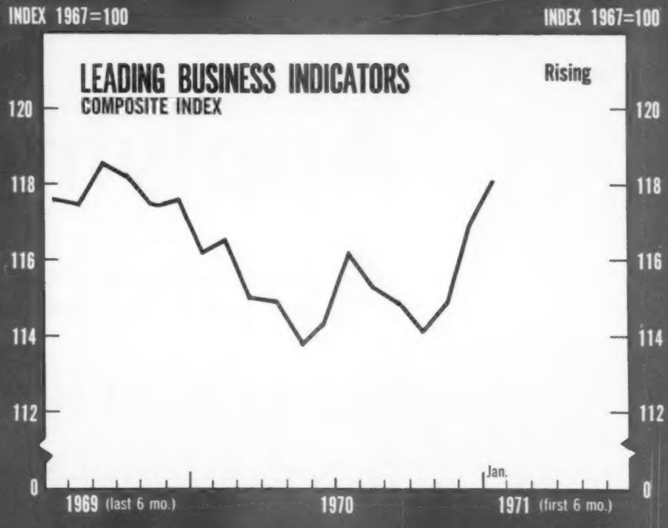
Housing declined in January following an extraordinarily large gain in December. Month-to-month movements in housing are often erratic, however, and the outlook for homebuilding remains very promising.

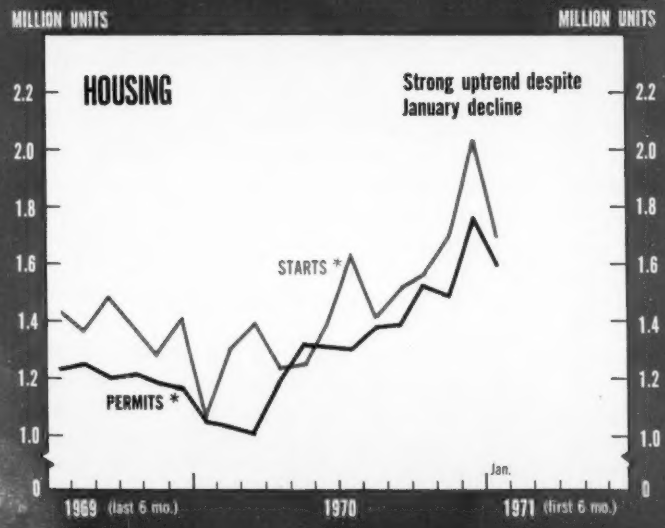
Latest Indicators

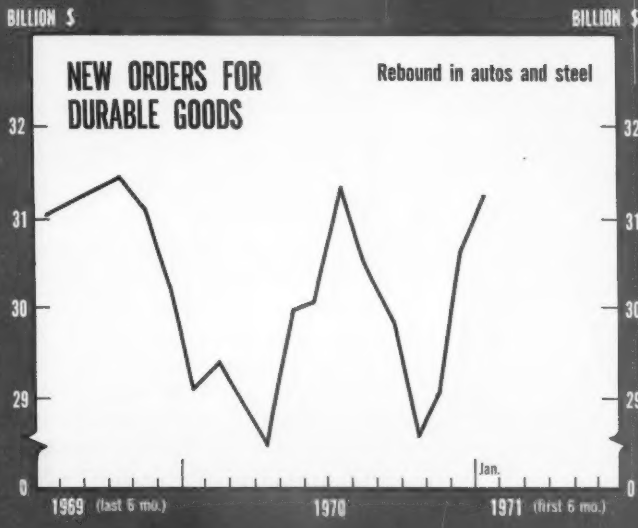












[1] Unified Budget basis
Monthly data seasonally adjusted
* Annual Rate

Commerce Today
March 8, 1971
Vol. I, No. 11

Applying The Human Approach To Housing

NBS To Assist In 'Operation Breakthrough' To Solve Large-Scale Production Problems

A factory-built, three-bedroom modular housing unit will soon undergo exhaustive testing and evaluation at the Building Research Division of Commerce's National Bureau of Standards as part of a major program to help solve the problems of large scale housing production.

The 60-foot unit, designed and built by Levitt Technology Corp., a subsidiary of Levitt and Sons Inc., arrived at NBS' Gaithersburg, Md., campus late last month from a Levitt plant in Kalamazoo, Mich.

The module is one of 2,000 prototype housing units for all income levels to be built by 22 producers selected by the Department of Housing and Urban Development for its "Operation Breakthrough" program.

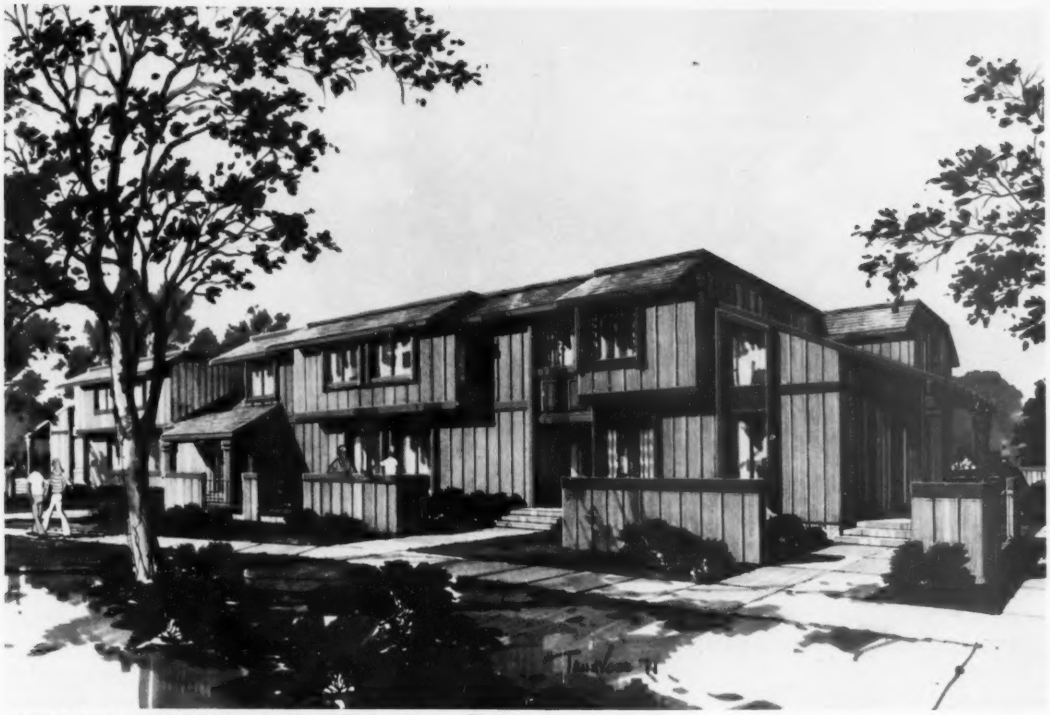
"Operation Breakthrough" is HUD's attempt to overcome constraints on volume housing production.

The Levitt module is the first of the "Operation Breakthrough" prototypes to be evaluated against performance criteria developed by a team within NBS' Building Research Division.

Performance criteria offer the means of measuring how a house performs in the service of its occupants—without regard to whether it represents conventional construction methods.

In building, performance refers to the achievement of a function, such as "the wall shall stand up," as opposed to such "cookbook" requirements that demand wall studs be 16 inches on center.

"Performance leaves something to the



FINISHED PRODUCT—*Levitt Technology Corp. spent several years of research and development on the housing system shown in this finished model. It is one prototype for "Operation Breakthrough" to be tested by the National Bureau of Standards.*

imagination of the product producer and the building designer," Dr. James R. Wright, chief of the NBS Building Research Division, explains. "The evaluation criteria set levels of health and safety, liveability and durability, but leave the methods of achieving these levels to the genius of private industry."

Through use of a phenomenon in housing known as the "housing system," HUD's program is designed to create economies of scale through volume production. It rests on the hope that this can be accomplished through use of modern technology and the management, financing and marketing capabilities of private enterprise.

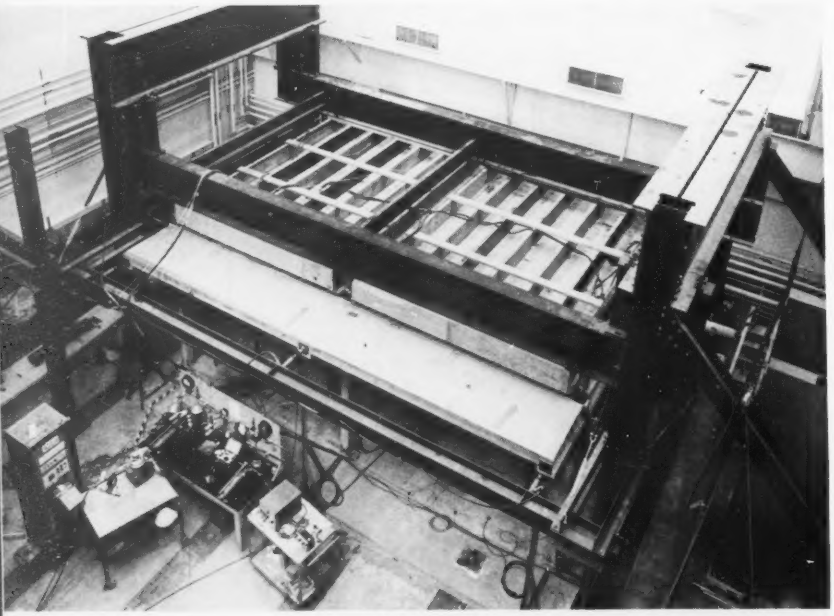
Also furnish criteria

Besides its role in preparing the criteria for the design and evaluation of "Operation Breakthrough" housing, the Building Research Division is furnishing HUD with climatological and regulatory (code) factors.

The Levitt module is of standard frame construction. Initial evaluation procedures at NBS will involve testing how the module withstood transport from Kalamazoo, Mich. The ideal testing procedures are achieved

PLANT TO NBS—*Levitt employees unload a modular housing unit at NBS' Gaithersburg campus.*

PREPARED FOR TESTING—*The 60-foot module, which contains three bedrooms and a living area portion of a two-dwelling unit, is prepared for evaluation against performance criteria. Levitt's module is the first in the "Operation Breakthrough" program to undergo evaluation at NBS.*



PHOENIX PROJECT—*A full scale unit of the low income housing system "Phoenix Project" that was tested at NBS is shown with test equipment installed. Over 40,000 measurements were made on the unit to determine its performance.*

through engineering analysis. If this is not possible, the module's dimensional stability will be tested by physical simulations.

Long-range research projects are also underway in connection with a HUD and Commerce Department agreement which puts NBS—with many decades of research in building technology behind it—in the role of serving as HUD's technological arm.

"We must go back to the final judge of a building, the user, to acquire the feedback information for more advanced health and safety regulations and a more substantive basis for housing designs," says Dr. Wright in discussing a major feedback effort the Building Research Division is designing for the "Breakthrough" program.

"The satisfaction of human needs is an objective that is both exciting and imperative," Dr. Wright adds. "We know that past efforts to solve the housing problem in strictly quantitative terms have not been successful."

Housing systems are generally factory-built and are often comprised of three dimensional space modules or "boxes," or panels which are joined together at the site to form the house. These systems represent a decisive departure from conventional "stick-built" construction in their more industrialized methods of production.

An earlier project of HUD, evaluated by the Building Research Division in 1969, was the "Phoenix Project" in Detroit.

"Phoenix Project" was designed as a building system too. The strength and stiffness of the building system depend on interactions between the basic structure and other elements that are normally considered to be architectural. Usually, buildings are designed neglecting this interaction.

A unique feature of the system used in "Phoenix Project" was dependence upon the strengthening effects of the partition walls. As these walls are not usually relied upon to add strength and support to the structure, this aspect had to be verified by BRD tests.

Eighteen different types of load tests were performed. The Building Research Division concluded that the system performed well in terms of performance criteria that were set for its evaluation and, as a system, it exhibited strength and stiffness far in excess of service requirements.

Although recently BRD has oriented a substantial portion of its effort to the housing problem, it has for many years supplied direct laboratory and field support to some 35 federal agencies. In addition, its teams of troubleshooters probe the anatomy of disasters in search of clues to aid in better building practices.

A team of building-structure experts is presently in southern California as part of an on-the-scene investigation to evaluate effects of the recent earthquake and aftershocks.

BRD teams also gleaned valuable information from the rubble left by a tornado which struck Lubbock, Texas, last year, Hurricane Camille which swept the Gulf Coast in 1969, and the Fairbanks, Alaska, flood of 1967.

An NBS team came away from a two-day inspection of the Lubbock tornado area convinced that "many structures in the tornado's path would have been damaged far less seriously had better building methods been employed." Its investigation of the disaster area where 25 persons were fatally injured, 500 injured and 3,500 made homeless revealed "many failures at points where building parts had been joined together and where lightweight buildings had been anchored to the ground."

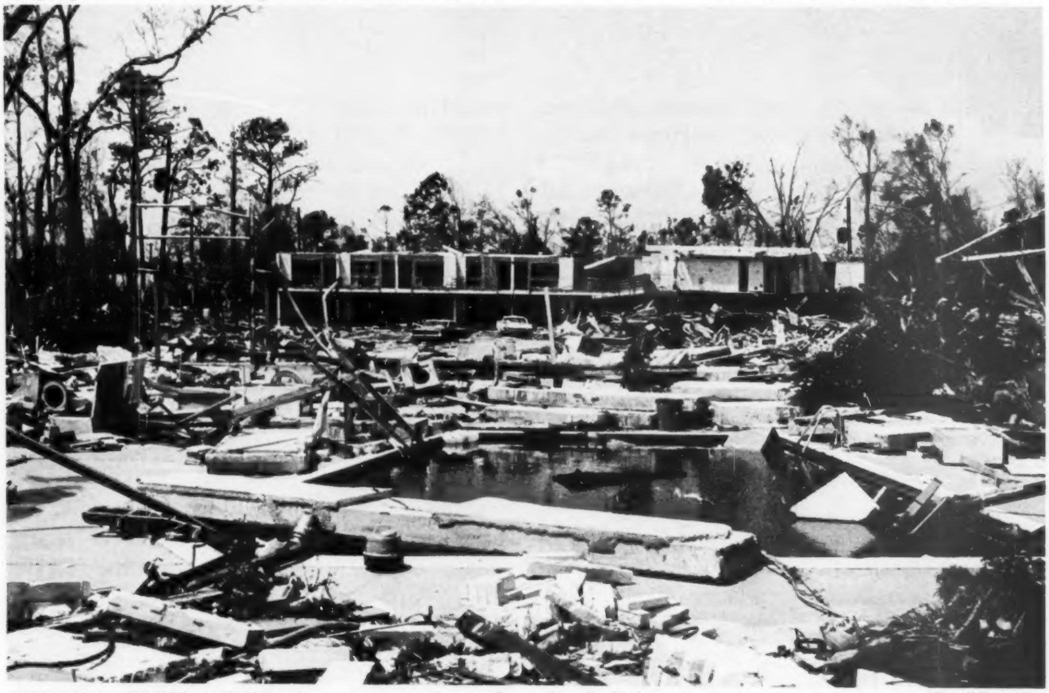
Ruins left by Hurricane Camille were closely examined by an NBS team which has undertaken a search for formulae for constructing buildings that will withstand future hurricanes.

The great Fairbanks flood of 1967 provided the setting for another kind of NBS service. With not a single house in Fairbanks free of flood damage, and with public facilities and commerce and industry similarly crippled, the crucial need was to find quick, safe methods of drying structures out before the winter freeze arrived.

Two NBS representatives flew to the area, surveyed the disaster and made a series of recommendations to aid Fairbanks residents in removing water from buildings before the freeze set in.

Major areas of investigation at the Building Research Division include structures, interior environments, durability of materials, fire safety, standards and codes, systems engineering, building economics and the sensory environment, all of which are essential to the improvement of the nation's housing.

—National Bureau of Standards



LESSONS FROM RUINS—*Devastation along the beachfront occurred in Hurricane Camille. Surviving buildings had structural frames or load-bearing walls at right angles to the beach.*

Census Data Help U.S. Business Pinpoint Markets Of The 1970s

Breakdown Reveals Customer Characteristics; Information Now Available On All States

How many men, women, children, teen-agers, wage earners and retired people are there in the U.S.? How can they be pinpointed? Where are the coming markets for business and industry?

Manufacturers, wholesalers, retailers—industry and business throughout the United States may now have the answers to these questions from 1970 census data that will help them plan production and distribution.

The Census Bureau has just published an advanced summary General Population Characteristics Report for the United States which gives the 1970 census details on race, sex, age and relationship to the head of the household, as they have been tabulated for each State in the Nation. As an introduction to this summary information,* Commerce Today *is offering its readers comparative 1960-1970 race, sex and age figures for the first 28 states for which tabulations were available.

The Census Bureau has issued race, sex and age data for each State and, additionally, has summarized these findings for the Nation. This article focuses on 28 of the smaller U.S. States. Of these, 16 can boast a count of more than one million persons, and 11, more than two million. In addition, the areas of these States, in general, are broadly representative of the United States, with the exception of the larger metropolitan areas. These demographic patterns are, therefore, of broad interest to business and industry.

For the States covered in this report, the northeast section of the Nation is represented by Maine, New Hampshire, Rhode Island, and Vermont. Covering the north central division are Indiana, Iowa, Kansas, Missouri, Nebraska, North Dakota, and South Dakota. In the southern section, the figures are given for Alabama, Arkansas,

Racial Distribution

	Whites		Negroes		Other Races		Number of Whites in 1970 (in thousands)	Percent Change Since 1960	Number of Negroes in 1970 (in thousands)	Percent Change Since 1960	Number of Other Races in 1970 (in thousands)	Percent Change Since 1960
	1970	1960	1970	1960	1970	1960						
Alabama	73.4	69.9	26.4	30.0	0.2	0.1	2,529	+10.7	908	- 7.3	7	+142.5
Arizona	90.6	89.8	3.0	3.3	6.4	6.9	1,605	37.2	53	+ 22.9	113	26.2
Arkansas	81.2	78.1	18.6	21.8	0.3	0.1	1,561	+11.9	357	- 8.1	5	+178.5
Delaware	85.1	86.1	14.2	13.6	0.6	0.3	466	+21.4	78	+ 29.0	3	+163.8
Hawaii	38.8	32.0	1.0	0.8	60.2	67.3	298	+47.4	8	+ 53.2	463	+ 8.7
Idaho	98.1	98.5	0.3	0.2	1.6	1.2	699	+ 6.3	2	+ 41.8	12	+ 40.1
Indiana	92.8	94.1	6.9	5.8	0.3	0.1	4,820	+ 9.8	357	+ 32.8	16	+240.1
Iowa	98.5	99.0	1.2	0.9	0.3	0.1	2,783	+ 0.9	33	+ 28.6	9	+159.6
Kansas	94.5	95.4	4.8	4.2	0.8	0.4	2,122	+ 2.1	107	+ 17.0	18	+106.3
Louisiana	69.7	67.9	29.9	31.9	0.4	0.2	2,540	+14.8	1,089	+ 4.8	13	+113.5
Maine	99.3	99.4	0.3	0.3	0.4	0.3	985	+ 2.3	3	- 15.6	4	+ 49.5
Mississippi	62.8	57.7	36.8	42.0	0.4	0.2	1,393	+10.8	816	- 10.9	8	+ 62.0
Missouri	89.3	90.8	10.3	9.0	0.4	0.1	4,177	+ 6.5	480	+ 22.9	19	+214.2
Montana	95.5	96.4	0.3	0.2	4.2	3.3	663	+ 1.9	2	+ 36.0	29	+ 30.2
Nebraska	96.6	97.4	2.7	2.1	0.8	0.5	1,433	+ 4.2	40	+ 36.4	11	+ 46.7
Nevada	91.8	92.3	5.7	4.7	2.6	2.9	448	+70.1	28	+105.9	13	+ 53.3
New Hampshire	99.4	99.6	0.3	0.3	0.3	0.1	733	+21.3	3	+ 31.6	2	+202.6
North Carolina	76.6	74.6	22.4	24.5	1.0	0.9	3,892	+14.5	1,138	+ 1.9	53	+ 29.5
North Dakota	97.0	98.0	0.4	0.1	2.6	1.9	599	- 3.3	2	+221.0	16	+ 30.1
Oklahoma	88.9	90.5	7.0	6.6	4.2	2.9	2,275	+ 7.9	178	+ 16.2	106	+ 57.8
Oregon	97.2	97.9	1.3	1.0	1.6	1.1	2,032	+17.3	26	+ 45.1	33	+ 78.2
Rhode Island	96.6	97.6	2.7	2.1	0.7	0.3	915	+ 9.1	25	+ 38.2	7	+171.3
South Carolina	69.3	65.1	30.5	34.8	0.3	0.1	1,794	+15.7	789	- 4.9	7	+208.9
South Dakota	94.7	96.0	0.2	0.2	5.0	3.9	630	- 3.5	2	+ 46.1	34	+ 27.5
Utah	97.4	98.1	0.6	0.5	2.0	1.4	1,032	+18.1	7	+ 59.5	21	+ 63.9
Vermont	99.6	99.8	0.2	0.1	0.2	0.1	443	+13.7	0.8	+ 46.6	1	+276.3
West Virginia	95.6	95.1	4.2	4.9	0.2	0.1	1,667	- 5.8	74	- 17.3	3	277.6
Wyoming	97.2	97.8	0.8	0.7	2.1	1.5	323	+0.03	3	+ 17.6	7	+ 37.6

Delaware, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, and West Virginia; in the western section, for Arizona, Hawaii, Idaho, Montana, Nevada, Oregon, Utah and Wyoming.

The patterns of racial distribution show great variations among these smaller States. Although whites represent 95 percent or more of the population in 13 of the 28 States, only nine showed an increase in their proportion of whites over 1960 data—Alabama, Arizona, Arkansas, Hawaii, Louisiana, Mississippi, North Carolina, South Carolina, and West Virginia.

Negroes, on the other hand, increased their percentage standing in 17 of the 28 States, and the other minority races grew in percentage distribution in all but three States—Arizona, Hawaii and Nevada.

In addition to increasing their percentage ratio in Delaware, Hawaii, Idaho, Indiana, Iowa, Kansas, Missouri, Montana, Nebraska, Nevada, North Dakota, Oklahoma, Oregon, Rhode Island, Utah, Vermont, and Wyoming, Negroes held their own in three States—maintaining a stability of population percentage in Maine, New Hampshire and South Dakota.

Widespread gains

In actual numbers, the white population increased in 25 of the 28 tabulated States over the past decade. However, only eight of these States with a higher white population recorded an increase over 15 percent—Arizona, Delaware, Hawaii, Nevada, New Hampshire, Oregon and South Carolina, and Utah. Nevada, which led the Nation in its overall population increase since 1960, ranks highest, showing a 70 percent jump in its

Males And Females

	Males per 100 Females in 1970	Males per 100 Females in 1960	Males in 1970 (in thousands)	Percent Change Since 1960	Females in 1970 (in thousands)	Percent Change Since 1960
Alabama	93.2	95.0	1,661	+ 4.4	1,783	+ 6.4
Arizona	96.8	101.2	871	+33.0	900	+39.0
Arkansas	94.0	96.9	932	+ 6.0	991	+ 9.3
Delaware	95.2	98.2	267	+20.9	281	+24.7
Hawaii	108.1	114.8	399	+18.0	369	+25.5
Idaho	99.7	102.9	356	+ 5.1	357	+ 8.5
Indiana	95.1	97.2	2,531	+10.1	2,662	+12.6
Iowa	94.6	97.2	1,373	+ 1.0	1,452	+ 3.8
Kansas	96.2	98.6	1,102	+ 1.9	1,145	+ 4.4
Louisiana	94.7	95.6	1,770	+11.2	1,871	+12.4
Maine	94.8	97.7	483	+ 0.8	509	+ 3.9
Mississippi	94.0	96.2	1,074	+ 0.6	1,143	+ 2.9
Missouri	93.2	95.3	2,256	+ 7.0	2,421	+ 9.5
Montana	99.9	103.8	347	+ 0.9	347	+ 4.9
Nebraska	95.4	98.4	724	+ 3.5	759	+ 6.7
Nevada	102.8	107.1	248	+68.0	241	+74.9
New Hampshire	95.7	96.5	361	+21.0	377	+22.1
North Carolina	95.9	97.3	2,487	+10.7	2,595	+12.4
North Dakota	101.8	104.5	312	- 3.6	306	- 1.0
Oklahoma	94.8	97.2	1,246	+ 8.5	1,313	+11.3
Oregon	95.9	99.0	1,024	+16.4	1,067	+20.1
Rhode Island	96.2	96.4	464	+10.1	482	+10.2
South Carolina	96.5	97.4	1,272	+ 8.2	1,318	+ 9.3
South Dakota	98.4	102.4	330	- 4.1	335	- 0.2
Utah	97.6	99.8	523	+17.6	536	+20.3
Vermont	95.6	96.8	217	+13.3	227	+14.6
West Virginia	93.8	96.8	844	- 7.7	900	- 1.6
Wyoming	100.7	104.9	167	- 1.3	166	+ 2.9

white population. Hawaii is second, with a 47 percent climb in the number of whites; Arizona, third, with a 37 percent increase.

The only declines in the number of whites in the ten-year span were recorded in North Dakota, South Dakota and West Virginia.

Negro population also climbed in this 28-State count; 22 States claim a higher number, and 20 of these States reveal an increase over 15 percent. North Dakota shows the biggest gain in Negro population—a 221 percentage increase. But, even with the increase, the total number of Negroes in North Dakota is only 2,000. Only in Alabama, Arkansas, Maine, Mississippi, South Carolina and West Virginia were there decreases.

It may be significant to note that with the exception of one New England State (Maine), the only decreases in the percentage of the Negro population occurred in the South, which may indicate that the movement of the Negro population towards North and West continued through the 1960s.

Other minority races also showed strong increases in their numbers in these 28 States during the last ten years. Since 1960, only one state—Hawaii—reveals a decrease in numbers of other races, and 13 of the 27 States recorded increases rising over 100 percent.

Women still outnumber men—at least the proportion of males to females in 28 of the States points towards this conclusion. In only four of these States are there more males than females—Hawaii, Nevada, North Dakota and Wyoming. In 1960, eight States boasted more men than women; the four already mentioned, plus Arizona, Idaho, Montana, and South Dakota.

In 1970, there was a decrease in the number of men from 1960 totals in North Dakota, South Dakota, West Virginia and Wyoming. Females also dropped in number in the Dakotas and West Virginia, but showed a 2.9 percent increase in Wyoming.

Population by age

The breakdown of the population of these 28 States by age groups confirms a Census Bureau conclusion that the birth rate is continuing to drop. Child-bearing age women had fewer children between 1960 and 1970 in these States, as indicated by a decrease in the children under five category for all States except Nevada.

Although Nevada records a surprising 32 percent increase in its youngest age group, this may be the result of its overwhelming population percent increase—the largest of any State in the Union. (Toy manufacturers, take note).

The five-to-14 age group grew nationwide, according to Census Bureau figures. Nationally, this group made up the third largest segment of the 1970 and 1960 population counts. For the 28 States, this segment of the population has shown an increase in all but six States(Mississippi, the Dakotas, South Carolina, West Virginia and Wyoming).

Nevada census records show a startling 85 percent increase in its five-to-14 year olds; Delaware, more than 32 percent; and Arizona, 32 percent.

When the next decennial census is taken, the five-to-14 age sector will take its place in the 15-to-24 age group, making this group a strong U.S. consumer and the one on whom business and industry will need to concentrate.

The fourth largest age group in the 1970 and 1960 counts spotlights the older brothers and sisters, from 15-to-24. This age segment includes the young marrieds who are now in the market for scores of products.

The 15-to-24 year olds jumped in number in all of the 28 States, and 26 indicated an increase of 25 percent. Again Nevada was out in front with a 109 percent increase. Arizona ranks second, raising its numbers 70 percent.

Delaware is third, showing a 66 percent increase in its 15-to-24 years olds.

The age group between 25 and 44 years constituted the largest group in the 1970 and 1960 counts. However, half of the 28 States reported decreases, ranging from Alabama's nearly 2 percent drop to West Virginia's decrease of 16 percent. Except for Arizona's 70 percent increase, and Nevada's 60 percent climb, only two States tabulate an increase over 10 percent—Hawaii and New Hampshire.

All these 28 States show increases over the 1960 figures in the 45-to-64 age group, the second largest segment in the 1970 and 1960 counts. Eleven States, in fact, recorded increases over 15 percent. The senior citizen age group (65 and over) also increased in number for the entire 28-State poll. In Arizona, these figures jumped 79 percent; and Hawaii, 51 percent. This age segment ranked fifth in 1970 and sixth in 1960.

In 1960, the median age for the United States was 29.5. In 1970, 18 of the States covered by this report show a lower median age, and the Census Bureau has calculated it now at 27.8 years for the Nation as a whole.

A General Population Characteristics Report (PC-V2) has been issued separately for each State. Data are broken down for the State as a whole, for each of its Standard Metropolitan Statistical Areas, for each place of 10,000 inhabitants or more, and for each county or comparable area. Age groups are broken down in greater detail than in this brief survey, but comparable 1960 figures are not included for any of the items.

Each State publication, as well as the advance summary report, is available for 30 cents from the Bureau of the Census, Washington, D.C. 20233, or from any of the U.S. Department of Commerce Field Offices.

—*Census Bureau*

Changes In Age Groupings

	Under 5		5-14		15-24		25-44		45-64		Over 65		
State	1970 (in thousands)	Percent Change Since 1960	1970 (in thousands)	Percent Change Since 1960	1970 (in thousands)	Percent Change Since 1960	1970 (in thousands)	Percent Change Since 1960	1970 (in thousands)	Percent Change Since 1960	1970 (in thousands)	Percent Change Since 1960	Median Age in 1960
Alabama	302	-22.7	719	+ 0.2	616	+26.5	791	- 1.5	690	+13.7	326	+24.7	26.0
Arizona	159	- 5.0	379	+32.5	318	+70.2	412	+20.2	342	+49.0	161	+79.0	25.7
Arkansas	159	-18.3	383	+ 2.1	326	+29.7	412	+ 3.5	406	+ 9.0	237	+22.0	29.0
Delaware	48	-12.5	117	+32.6	95	+66.3	136	+ 7.3	108	+29.9	44	+22.6	28.7
Hawaii	71	-12.5	160	+16.7	153	+45.5	203	+10.7	138	+41.7	44	+51.3	24.3
Idaho	64	-22.3	152	+ 2.1	127	+35.0	157	- 1.7	143	+16.9	68	+16.3	26.0
Indiana	456	-16.1	1,075	+14.5	917	+45.8	1,222	+ 1.5	1,030	+14.1	494	+10.8	28.9
Iowa	233	-24.1	574	+ 4.2	477	+33.2	612	- 6.2	579	+ 3.0	350	+ 6.9	30.3
Kansas	175	-28.9	440	+ 3.2	406	+39.9	501	- 8.0	459	+ 6.3	266	+10.8	29.9
Louisiana	349	-17.4	807	+11.3	675	+44.6	826	+ 2.2	677	+14.3	307	+27.0	25.3
Maine	85	-22.2	201	+ 4.7	168	+26.2	219	- 6.8	204	+ 5.6	115	+ 7.6	29.5
Mississippi	210	-24.7	490	- 2.3	406	+22.6	466	- 1.8	422	+ 5.2	222	+17.0	24.2
Missouri	371	-25.5	919	+15.0	784	+40.0	1,060	+ 0.5	981	+48.3	561	+11.4	31.6
Montana	57	-31.3	151	+ 4.7	122	+34.9	155	- 7.0	141	+12.6	69	+ 5.1	27.6
Nebraska	120	-25.0	300	+ 8.9	258	+40.7	326	- 4.1	296	+ 2.6	184	+11.8	30.2
Nevada	44	+32.6	100	+85.0	79	+109.6	134	+60.4	100	+71.7	31	+70.4	29.5
New Hampshire ...	65	- 1.2	149	+28.0	126	+59.2	171	+13.1	149	+17.2	78	+15.8	31.0
North Carolina ...	439	-16.6	1,016	+ 2.1	984	+35.5	1,232	+ 3.4	998	+23.9	414	+32.7	25.5
North Dakota	51	-35.5	135	- 2.6	114	+26.1	130	-11.3	122	+ 2.0	66	+13.3	26.2
Oklahoma	198	-18.4	492	+ 8.0	450	+36.5	586	+ 3.2	536	+10.4	299	+20.1	30.0
Oregon	164	-11.5	406	+12.7	366	+61.5	480	+ 9.4	449	+19.9	227	+23.5	30.8
Rhode Island	76	-15.3	174	+13.1	174	+48.0	210	- 6.4	209	+13.4	104	+16.1	31.9
South Carolina ...	236	-20.1	552	- 0.6	519	+31.2	606	+ 1.6	487	+25.0	191	+26.8	23.4
South Dakota	54	-34.7	143	- 1.5	119	+30.3	136	-14.3	133	+ 1.9	80	+12.5	27.7
Utah	112	-11.4	241	+15.7	214	+56.8	238	+ 9.2	177	+24.6	78	+29.4	22.9
Vermont	40	- 9.6	92	+16.3	80	+48.5	99	+ 9.2	86	+ 9.5	47	+ 8.6	29.3
West Virginia	139	-29.2	336	-16.5	301	+15.1	383	-15.9	391	+ 5.0	194	+12.5	28.5
Wyoming	28	-30.1	70	- 0.5	58	+31.4	78	-10.0	67	+ 9.0	30	+16.6	27.3

Maritime Research Spells Industry Profits

Administration Adopts Practical Programs In Rebuilding America's Merchant Fleet

The Maritime Administration Research and Development program is launched on a new course—finding the way to *rebuild* and *deliver* to the United States a Merchant Marine advanced in technology, competitive in world trade, capable of fulfilling commercial needs and defense requirements.

At the same time, MarAd's R&D program intends to meet its national objectives while returning the largest possible gain to the taxpayer and while reducing or eliminating government subsidization of the industry.

A giant-sized task? Yes, but one that has been planned and analyzed to practically guarantee results.

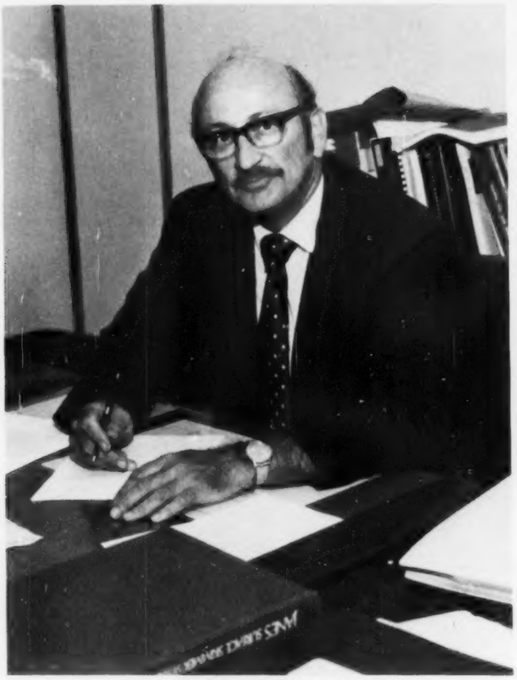
The ultimate goals of MarAd's R&D are to help fulfill the Maritime Administration's stated goals of rebuilding the U.S. Merchant Fleet, achieving shipbuilding and shipping industry self-sufficiency, maintaining an internationally competitive position and contributing to national security. They also parallel MarAd's implied goals of contributing to the economic strength of the Nation, providing social benefits, contributing to nationally significant programs, enhancing technical competency and aiding foreign policy.

Maritime's R&D has set up many blueprints to accomplish their aims through practical applications of technical advances and coordination with industry—specifically, through reductions in life-cycle costs, diminution of subsidy and increased production of commercial ship systems.

United States pioneers technology

As a Nation, the U.S. became great because of its experimentation and its advance in the field of technology. This technology was responsible for mass production, better goods at lower costs, and a high standard of living.

Today, however, this technology no longer belongs to the U.S. alone. Foreign nations have borrowed and improved on U.S. innovations and scientific developments, while experimenting with ideas of their own. In addition, other countries are able to develop and build on these ideas operating as one large company, while in the U.S. the anti-trust laws, which do protect the Nation's free enterprise system, have hindered this kind of nation-wide enterprises. As a Nation su-



Marvin Pitkin
Assistant Administrator
for Research & Development
Maritime Administration

perior in technology, the U.S. could become the corner grocery store, watching the supermarket take over.

Obviously, anti-trust laws are preferable to having monopolies run the business climate. Other methods of developing the merchant fleet must therefore be found.

The U.S. method of "science for science's sake" made the Nation the pioneer in the field of nuclear power, automation, and high-speed ships. But today, Maritime's R&D realizes the Nation must be more than a pioneer. It must not only develop, but effectively implement new, better technical advancement to make the U.S. merchant fleet the finest in the world.

A beginning

Having realized its job, the Maritime Administration also realized it could only be accomplished through the combined efforts of ship operators, shipbuilders, labor, research organizations, universities and government agencies interested and involved in maritime matters.

The result was the Woods Hole Conference on Maritime Research and Development sponsored by MarAd during July 1969. Almost 200 major executive and professionals interested in the maritime objectives attended this three-week conference, from which came the basis for the framework of the present Maritime R&D program.

More than one hundred specific projects or program elements were recommended by the Conference to become the building blocks for a five year program instituted by Maritime's R&D. The recommended spectrum of research projects ranged from near-term improvements in the 20-knot ships in operation today, to the high-speed (30-40 knot) unitized cargo ships of this decade, to even higher speed (50-100 knot) surface effect ships in the 1980s and beyond.

Martime's Asst. Administrator for Research and Development, Marvin Pitkin, identifies the Wood Hole Conference as "a beginning".

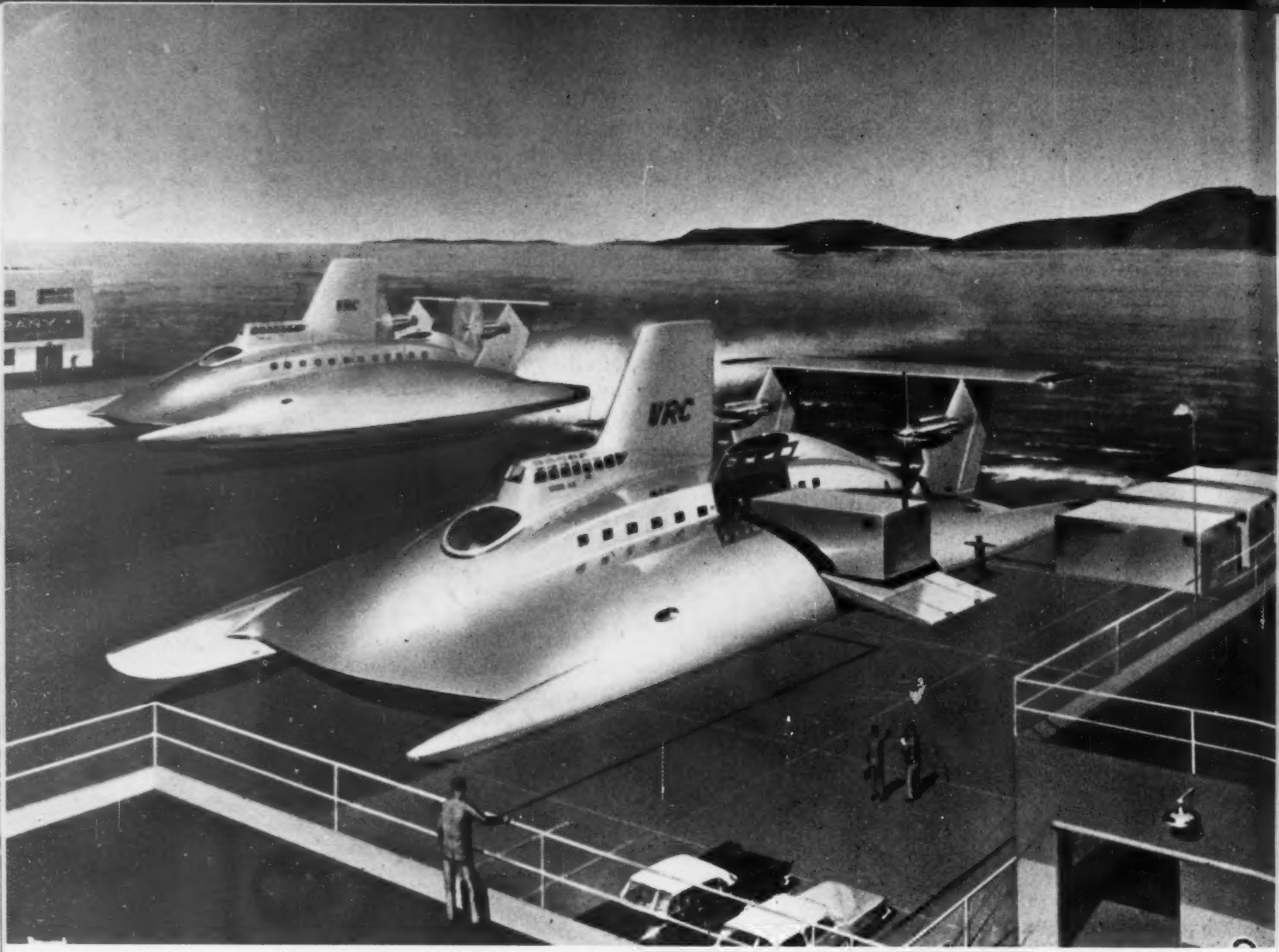
Major thrust

"The major thrusts of the program were determined through this Conference. Endorsements were given by the maritime community for finding better use of speed and increased revenue capability from faster turnaround that will increase earning power of capital invested in U.S. flag ships. This will provide incentives to build and operate higher speed ships at higher capital cost," he pointed out.

"Accordingly, the Conference recommended, among other things, that we extend our scientific capability in the disciplines of hydrodynamics, ship structures, propulsion and component reliability for high speed and very large ships," Pitkin said.

Heavy emphasis was also placed on improving the operation of today's fleet. Recommended tasks ranged from development of subsystem components such as a fully integrated steam propulsion plant, a second generation radar computer, an evaluation of contra-rotating propellers, and improved methods of stowing containers on deck, to an examination of the human problems of the labor force in terms of redundancy, skills, job satisfaction, career opportunities and industry wide stabilization of job opportunities.

In addition, the Conference saw a need for a better understanding of the sea spectrum itself, of the dynamics of ship motion, mooring and materials. Programs were recommended to support advances in the field of weather prediction, corrosion control, standardization, modular construction, hull design,



FUTURISTIC FLEET—*Ocean freighters may look like this tomorrow, with Maritime's Research and Development program working hand in hand with industry today, to develop marine technology, and to implement technical discoveries and designs into a modern and economical merchant fleet.*

terminal design, cargo handling and in operational and management skills.

Of necessity, the more than one hundred recommended projects had to be related to a benefit/cost ratio that would result in the most improvements to the Merchant Marine in the shortest possible time and which would also produce returns to both the shipbuilding industry and the shipping lines which could in turn begin to assume more responsibility for building and developing a new Merchant Marine.

Program priorities

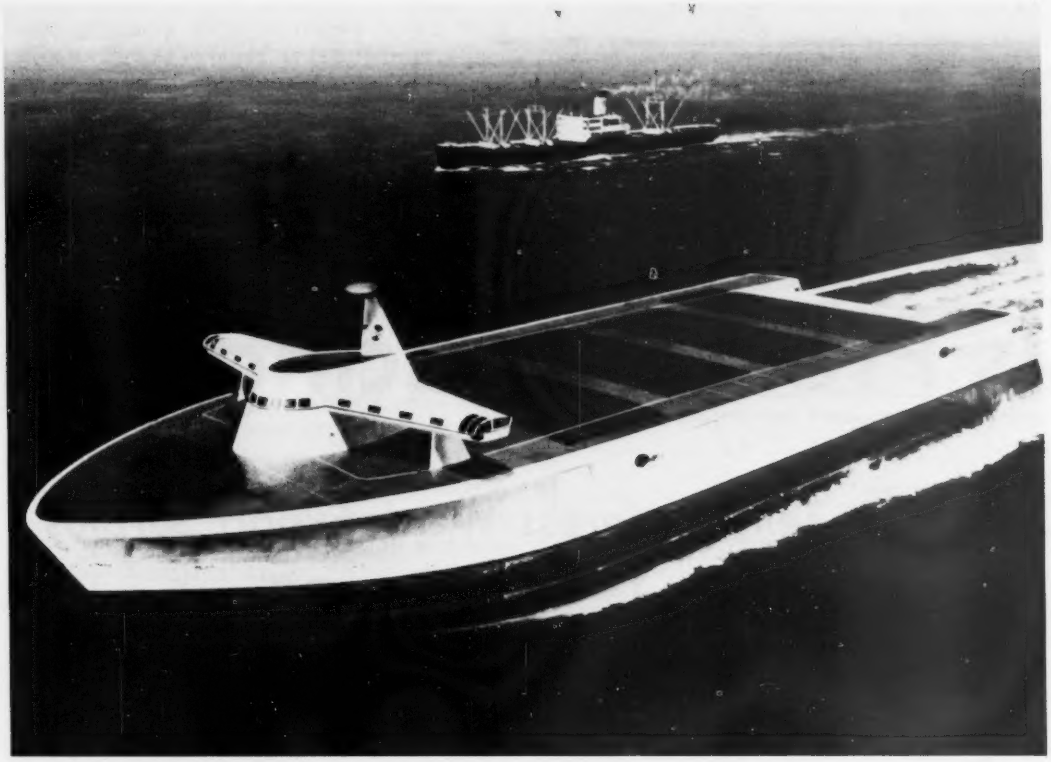
Priorities were established for the program which would result in near-term, high priority projects for competitive systems, mid-term, secondary priority programs for the development of new marine systems and markets, and advanced technology and third priority assignments for improved national marine research and scientific facilities.

These priorities were reached after hours of evaluation and study to produce key programs which will have high benefit/cost ratios, plus supporting marine science and technology program elements which will have a high impact on achieving the goals of the key programs.

Two industries

The program priorities were also divided to reach the two different industries involved with the Merchant Marine—the ship building industry and the shipping operators, according to Andrew E. Gibson, Assistant Secretary for Maritime Affairs.

Going full speed ahead now in the Maritime R&D program for the ship building industry are programs aimed at developing a



TODAY AND TOMORROW—*Experiments with nuclear powered ships could point the way to high-speed, low operating cost vessels which could increase U.S. potential for competition in world trade.*

competitive merchant ship for the U.S.:

- Studies on developing a standard ship which would lower building costs and produce more ships faster from shipyards.
- Research on improving ship systems, centering around regulatory improvements, improved engineering standards and computer aided designs.
- Examinations of shipyards, to implement computer aided construction, improved shipyards, and better methods of building personnel and developing a more sophisticated organization.
- Investigations into competitive power plants which are lighter in weight and more economical in operation.
- Evaluations on the reduction in the life-cycle cost of ships.
- Research on the possibilities of new types of standard ships which will increase the capabilities of the merchant fleet on inland waterways and in international waters. (Such ships as the tug-barge now being developed for transocean shipping fit into this category.)

Holding top priorities for the ship operators are the following Commerce Department Maritime Administration R&D programs:

- Developing better management capabilities through improving the curriculum and research at the U.S. Merchant Marine Academy at Kings Point, N.Y., and the other maritime academies.
- Advancing computer applications, as well as navigation and pollution abatement for ship operation.
- Researching maintenance and repair capabilities and advancing technology in this field, as well as improving intermodal transfer ashore.
- Investigating onshore and offshore terminal improvements.
- Utilizing the reserve fleet.
- Finding and developing new markets for the shipping industry.

Industry is an integral part of the new Maritime Administration R&D system. General Electric, Humble Oil, Esso Research and others are involved in projects with the government agency to find the way for advanced U.S. marine technology to take its place on the oceans in the form of the world's finest Merchant Marine.

—*Maritime Administration*

Basic Shift In Trade Is Problem Facing U.S.

Secretary Tells Congress Weak Export Surplus Has Deeper Roots Than Inflation; Offers Solutions

Achieving a satisfactory balance of trade with the world will be a difficult task for the United States in the years ahead and will require more tools than the country now has.

Secretary of Commerce Maurice H. Stans placed this prospect before the Joint Economic Committee of Congress last month. He said that those who blame U.S. inflation for the unsatisfactory trade surplus, and who expect a return to the healthy position of the mid-60s as inflation is curbed, are oversimplifying the problem. He presented a picture of structural shifts in U.S. foreign trade that, he emphasized, points to longer-range difficulties.

Secretary Stans, for this purpose, divided the goods that flow in and out of the country into four categories: agricultural products; raw materials such as minerals and oil; manufactured products that do not depend on sophisticated technology, such as steel, textiles, shoes and paper; and the products of advanced technology, such as computers, jets and some chemicals.

Analyzing trade trends from this standpoint, he declared that he is "unable to avoid the conclusion that the outlook for the U.S. trade balance is far from satisfactory, unless we somehow do much more than we are now doing to build exports."

Thus, in **agricultural products,** many countries in the world are seen as trying to expand local production, often on an uneconomic basis. To assist this domestic expansion, many have erected barriers to agricultural imports. In this category, therefore, the U.S. trade balance cannot be expected to improve significantly, and could deteriorate, unless this trend can be reversed.

In **raw materials** and fuels, the long-term trend has been for a continuous deficit, which has tended to increase moderately. A continuation of this trend is to be expected as the U.S. uses up its own resources and must increasingly turn to foreign sources of supply to meet the growing needs of its expanding economy.

In **non-technology-intensive manufactured products,** the trade deficit seems certain to grow, because many countries of the world are increasing the pace of industrialization. Using the most modern technology but paying lower wages, producers in these countries can undersell U.S. producers in many product lines.

In **technology-intensive manufactured products,** the U.S. has continued to maintain a leading position in world trade. This position, however, has not been strong enough in recent years to make up for the rising deficits in other goods. The fact that the surplus on technology-intensive goods has remained in the $9-$10 billion range for five years indicates that our technological superiority is slipping. Since 1962, imports of these products have increased more than twice as fast as exports. It is apparently just a question of time before this trade balance begins to deteriorate.

Secretary Stans told the Committee that in response to these problems "the main thrust of our efforts must be to improve the general export environment, particularly for those companies that account for the bulk of U.S. exports."

He saw opportunities to make such an improvement in providing more export financing and reasonable tax conditions for exporters, and in efforts to locate sales leads overseas and to increase export motivation. He told the Committee about current Commerce Department export promotion efforts, including trade exhibitions and trade missions, assistance with construction and procurement contracts, aid in finding distribution outlets, comprehensive marketing data, and counsel by U.S. Commercial Officers around the world.

The Secretary referred to the President's new Council on International Economic Policy, which he said aims to provide a clear focus on international economic issues at the top level.

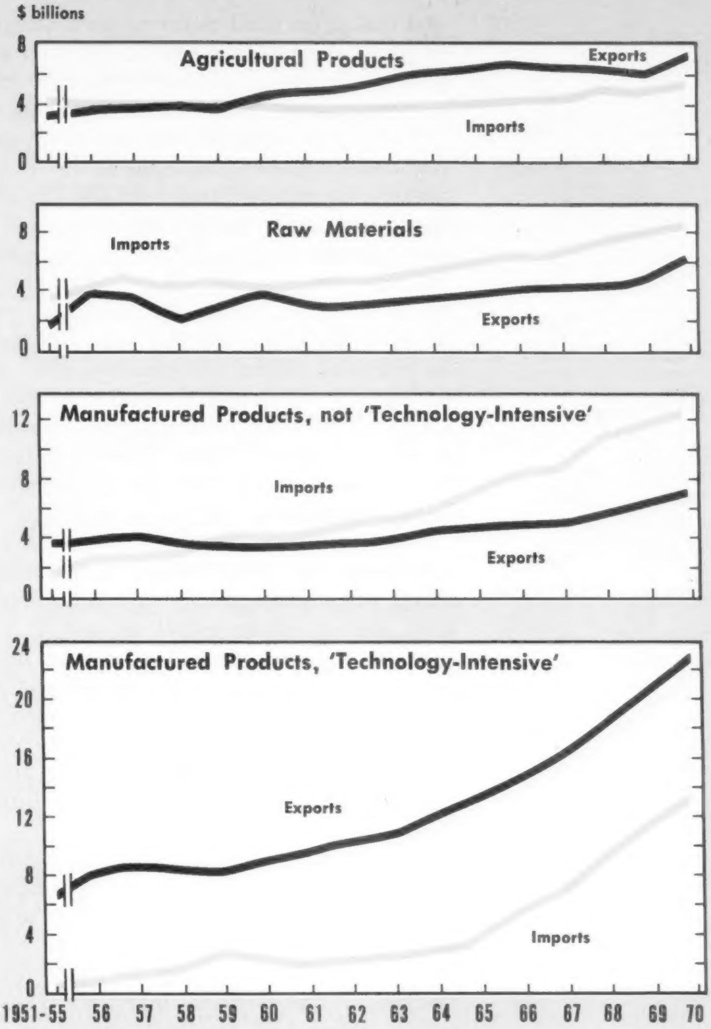
East-West trade potential

The Secretary called the Committee's attention to the possibilities of increased trade with Eastern Europe, calling this an area for expansion "as yet little explored by U.S. businessmen, but heavily exploited by commercial interests of every other major industrial country of the West."

He noted that merchandise trade with Eastern Europe has been expanding at a rate of 15 percent a year. Last year, it is estimated, the industrial West sold about $8 billion worth of goods to Eastern Europe (including the Soviet Union but excluding Yugoslavia), about $350 million or 4 percent of which came from the United States. Secretary Stans called this "a market where American goods are needed and wanted, and one that we are ideally suited to satisfy."

The Export Administration Act of 1969, under which U.S. exports to Eastern Europe are controlled, was depicted by Secretary Stans as less restrictive than earlier regulations and indicating a desire on the part of Congress for a liberalization of such controls. In 1970, the Office of Export Control in the Department of Commerce reduced export restrictions on over 1,300 commodities, including more than 350 types of electronic instruments, machinery and transportation equipment; 300 classes of metal and metal products; and 470 chemicals.

Structural Shifts in U.S. Foreign Trade



Several of the obstacles to Eastern Europe trade result from U.S. laws and policies, it was noted. Two in particular are the absence of Most-Favored-Nation treatment by the United States and the legal restraint on the Export-Import Bank that rules out guarantees on export loans to Eastern Europe. However, even with removal of these obstacles, the rate of growth in U.S. trade is expected to be relatively slow at first, because of Eastern Europe's lack of hard currency, the unsuitability of its products for the American market, and U.S. inexperience in the area as compared with that of Western Europe and Japan.

"We feel, however, that a potential is there and that opportunities for wider trade should be given serious consideration as soon as our general relations justify a change in our present policies," the Secretary commented.

Turning to financing, tax and other operating disadvantages encountered by U.S. exporters, Secretary Stans told the Committee that improved Eximbank programs will soon be supplemented by additional private means, through the Private Export Finance Corporation (PEFCO). Despite these major improvements, U.S. exporters are still regarded as unable to obtain the quantity, cost, terms and speed of export financing, which are available to their competitors. The Eximbank's liberalized lending policies and a plan to remove the bank from the unified Federal budget could help redress the balance.

U.S. exporters often are placed at a disadvantage by preferential tax treatment, which some governments extend to their export sector. In an effort to put U.S. exporters on a more equal footing, the Administration has proposed tax treatment more comparable to that available to exporters in many foreign countries and to the treatment accorded U.S. subsidiaries operating abroad, through establishment of Domestic International Sales Corporations.

The Secretary noted that U.S. antitrust policies need to be reviewed, particularly with respect to their application to the overseas operations of U.S. industries and to joint efforts by exporters to enter foreign markets. A "patchwork" maritime transportation policy has also left exporters with antiquated, confusing rate schedules and documentation requirements, as well as discriminatory rates, the Secretary said. These sometimes make it as much as twice as costly to ship from the U.S. to a foreign destination as to ship the other way.

U.S. Foreign Trade By Commodity Group

$ billions	1969			1970		
	Exports	Imports	Balance	Exports	Imports	Balance
Agricultural products	5.9	4.9	+1.0	7.2	5.7	+1.5
Raw materials	4.8	8.1	−3.3	6.1	8.4	−2.3
Manufactured products not technology intensive	6.2	11.7	−5.5	6.8	12.9	−6.1
Manufactured products technology intensive	20.6	11.3	+9.3	22.6	13.0	+9.6

Secretary Stans declared that new trading conditions require a fresh approach by the U.S. in formulating a workable trade policy, even while the country adheres to its long-standing overall effort to lower trade barriers. He said that the U.S. must now provide adequate measures to assist domestic industries and workers in meeting the pressures of strong foreign competition.

He said: "We can meet part of the problem through revision of our own trade laws; but some of the problem finds its source elsewhere." Then he spoke of the current concern over the maze of rules, regulations, tax discriminations, import restrictions, export subsidies, preferential trading arrangements and investment restraints which confront U.S. businessmen around the world. He acknowledged that the U.S. has trade restrictions of its own, and to realize the benefits of freer world trade it will be necessary to put its restrictions "on the table" in order to make reciprocal and beneficial agreements.

U.S. initiatives

He said: "This Administration has shown its desire to move in this direction. It supported trade legislation that would maintain the momentum toward a more liberal trade system, and among other things sought the elimination of the American Selling Price system of valuation of certain chemical imports. Through the General Agreement on Tariffs and Trade (GATT) and the Organization for Economic Cooperation and Development (OECD) we are continuing our efforts with other major nations to reduce or eliminate nontariff trade barriers. However, progress in this effort has been slow, not only because non-tariff barriers are difficult to deal with, but also because there is a general reluctance on the part of some of our important trading partners to participate actively in the effort."

Another major irritant he mentioned was the European Economic Community's Common Agricultural Policy (CAP). The CAP system, in the U.S. view, heavily disadvantages U.S. agricultural exports to the Community and subsidizes EEC agricultural exports to third countries. The problem of the Community's preferential arrangements with nonmember countries, primarily in the Mediterranean and Africa, also is irksome.

Japan, the second largest U.S. trading partner and primary purchaser of U.S. agricultural exports, despite some recent progress in removing import restrictions, still maintains the highest general tariff structure of the major industrialized countries. It was also depicted as holding to a number of important trade and investment restrictions that were erected while it was attempting to recover from wartime destruction, but which are out of place today.

Secretary Stans concluded his trade policy comments by saying it is time for other traders, including the EEC and Japan, to share free trade initiatives.

"This Administration is committed to the principles of freer trade, but the extent to which the U.S. can continue to adhere to these principles depends in large part on whether our trading partners pursue outward looking policies and play a more positive role in seeking ways and means of reducing their trade barriers."

Secretary Stans, assessing 1971 U.S. trade prospects — "not very encouraging" — presented a detailed outlook (published in Jan. 11 *Commerce Today*, Page 15.)

Category breakdown

In explaining to the Committee the structural breakdown of U.S. trade into four general categories, Secretary Stans presented two tables, one comparing 1969 and 1970 export-import totals in these categories and the other, 1957-70 trends.

The table on page 18 indicates that the trade balances in agricultural products, raw materials, and technology-intensive manufactured products improved in 1970 while the trade balance in manufactured products that are not technology intensive deteriorated. Expansion in industrial production abroad in 1970 spurred demand for U.S. raw materials while the U.S. economic slowdown moderated our imports of these products.

U.S. agricultural exports were strong to all major areas, outweighing the gain in imports. Short supplies of manufactured products abroad as a result of pressure on foreign capacity—as in the case of steel, for example—boosted exports of manufactured products that are not technology intensive, but imports of such items as textiles and shoes rose strongly, thus leading to a larger trade deficit in this category.

In technology-intensive manufactured products, exports of computers, other types of machinery, and jet planes were strong enough to outweigh a large rise in imports of machinery and autos.

Trends In U.S. Foreign Trade

$ billions	1957	1964	1969	1970
Agricultural products				
Exports	4.7	6.3	5.9	7.2
Imports	3.9	4.1	4.9	5.7
Trade balance	+0.8	+2.2	+1.0	+1.5
Raw materials				
Exports	3.3	3.4	4.8	6.1
Imports	5.0	5.5	8.1	8.4
Trade balance	−1.7	−2.1	−3.3	−2.3
Manufactured products not technology intensive				
Exports	4.0	4.4	6.2	6.8
Imports	2.9	6.0	11.7	12.9
Trade balance	+1.1	−1.6	−5.5	−6.1
Manufactured products technology intensive				
Exports	8.8	12.1	20.6	22.6
Imports	1.6	3.1	11.3	13.0
Trade balance	+7.2	+9.0	+9.3	+9.6

The table above and the four segments of the graph on page 17 show the trends in U.S. foreign trade over a longer interval—from the 1950s to 1970. Agricultural exports have generally been higher than imports during the past decade or so, with no tendency for the modest favorable balance to change much.

In raw materials, there has been a persistent trade deficit which, over the years, has widened slightly. In 1970, however, the trade deficit in this category improved by a billion dollars. This improvement is in all probability only temporary, related as it was to capacity shortages abroad and the economic slowdown in the United States.

In manufactured products that are not technology intensive, the trade balance has moved unfavorably for two decades. The gap has widened at an accelerating pace since the mid-1960s.

In technology-intensive manufactured products, the trade balance improved until the mid-1960s, when it levelled off at about $9 billion. It has not increased out of the $9-$10 billion range because imports of these products have been increasing at a rate more than twice as fast as exports since 1962. If this ratio continues, the surplus in technology-intensive goods will soon begin to decline.

"This sector-by-sector approach does not reflect all factors determining our trade performance," Secretary Stans declared. "Business cycle developments, at home and abroad, are obviously relevant. I believe, however, that this approach gives proper emphasis to the important structural changes in our trade position that are often overlooked."

DOMESTIC BUSINESS REPORT

- Returning veterans helped in job search
- USTS finds new track for U.S. travel promotion
- Shipbuilding Commission reviews industry
- World War II barge to fly new flag
- OMBE affiliate office launched in Baltimore
- Little change in U.S. mobility rate

More Volunteers Join Battle Aiding Veterans' Job Campaign

A million veterans are leaving the Armed Forces each year to face yet another battle—finding a job in civilian life.

Although 50 percent of these veterans return to the job they left behind, 20 percent go on to school and 8 percent have acquired new skills from their service training, 22 percent find themselves with not enough education or marketable skills to find employment.

It is with this 22 percent that the Jobs for Veterans program is concerned.

James F. Oates, Jr., retired Chairman of the Board and Chief Executive Officer of the Equitable Life Assurance Society of the United States, heads the program. In this capacity, he is calling on federal, state and local governments, private employers, service organizations, labor, and universities to find training opportunities and jobs for the men and women returning to civilian life only to find critical unemployment problems waiting.

Across the Nation, more than 50 cities and countless organizations have been answering this call. More are added to the roll each day, developing task forces to tackle the problem and find the answers.

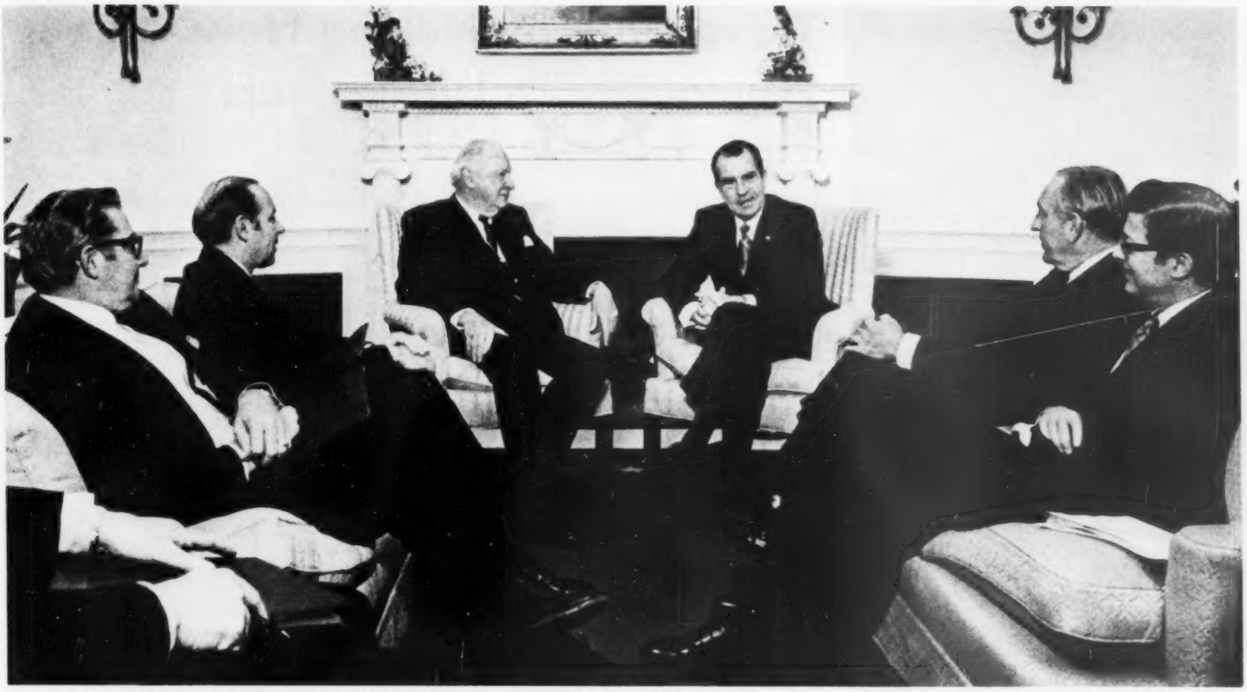
Chicago's new committee for Jobs for Veterans may be the largest to date. In Chicago, the "Mayor's Committee for Jobs for Veterans" will kick off its campaign March 18 at the Palmer House. More than 1000 of the city's businesses, labor unions, government representatives, community leaders and university officials will attend, including 700 chief executive officers of major Chicago firms.

According to John M. Coulter, a Chicago Association of Commerce and Industry Director who is planning the campaign, "The Chicago situation is perhaps unique. About 40 percent of the jobless rate for our returning veterans is held by minorities. As part of our program, therefore, we were able to combine forces with the National Alliance of Businessmen, since Alliance Pledges can be redeemed with Veterans who meet the definition of 'hard core'."

It may be that the Chicago campaign can serve as a pattern for other city task forces in the country who find a large number of minorities among the servicemen and women completing their military service to find themselves on the unemployed lists.

Government involvement

Federal government agencies are marshalling their resources to help with the program. The Department of Commerce, the Labor Depart-



WIDENING VETERAN JOB OPPORTUNITIES—*Attending the White House Conference launching the Jobs for Veterans Program were (left to right) Donald E. Johnson, Admin. for Veterans Administration; J. D. Hodgson, Secretary of Labor; James R. Oates, Jr., Nat'l Chmn, Jobs For Veterans; President Nixon; David Packard, Deputy Secretary of Defense; and Rocco Siciliano, Under Secretary of Commerce. The President called for nationwide support of the drive.*

ment and the Department of Defense are strongly involved.

Commerce Department efforts are extending nationwide through the Office of Business Services Field Offices. Recent reports from these offices show increased activity for JFV. In—

Texas—Mayor Louie Welch of Houston named Humble Oil V.P. William Bryant to head a "Blue-ribbon committee to support the JFV drive.

Tennessee—Memphis Mayor Henry Loeb has formed broad based planning committee to develop a JFV program for the city.

Minnesota—The Minneapolis Field Office Director has been appointed chairman of a committee to evaluate the possibility of holding a job mart for returning veterans in the Minneapolis-St. Paul area.

Nevada—Mayors of both Reno and Las Vegas have appointed JFV committees.

Kansas—Mayor A. P. Woodard, Jr. proclaimed March as JFV month in Wichita. A Task Force to find training and jobs for returning veterans is being developed by the city's Manpower Coordination Center staff.

Alaska—A Task Force has been established in Anchorage composed of the Mayor, Teamsters, Smyth Overseas Van Lines, Instant Printers, Central Labor Council, Oil Industry, VFW, American Legion, Civil Service Commission, Department of Labor and VA.

Colorado—The JFV program has been launched by a Governor's proclamation in the state. Called Project: Jobs for Veterans-Colorado, the document names April as JFV month.

Florida—The Governor issued a proclamation on January 21 declaring 1971 Jobs for Veterans Year in the State.

At a job mart held in Boston, 250 employers offered 15,000 jobs to veterans, ranging from $4,500 to $18,000 annually. A number of veterans attending the mart were hired on the spot.

A New York City program is in the planning stage. The kick-off program is expected to be launched in late April. Members of the Task Force being appointed to the committee will work closely with the members of the New York Advisory Council on Jobs for Veterans to specially design the program to meet the needs of the unemployed ex-servicemen in the city.

Program mission

The Jobs for Veterans program has a four-fold mission:

1. To increase awareness of the veteran as a job candidate.
2. To fully utilize existing programs linking the veteran with jobs and training, re-directing emphasis where appropriate.
3. To stimulate the formation of action groups to marshal available resources.
4. To encourage public and private employers to actively seek out and hire or train veterans.

—National Committee
Jobs For Veterans

CHEROKEE RAIN DANCE—*A Cherokee Indian, with Trainex, demonstrates a rain dance for British bystanders and members of the tour team.*

Travel Service Seeking New Promotions To Lure Visitors

A train filled with cowboys, Indians and a colorful bit of Americana—past and present—whistle-stopped its way across Great Britain last month in what could become the "in" way to attract foreign visitors to North America.

Some 20,000 persons viewed VISIT U.S.A. exhibits and Canadian tourist displays during the six coach train's 1,300 mile journey. The United States Travel Service will review the success of the pilot project called "Trainex", with an eye toward arranging a similar travel train to tour Europe in 1972 or later.

The exhibition dramatized what North America has to offer British holiday makers. It underscored low cost excursions and group fares within reach of vast numbers of middle-income Britishers who would like to visit friends and relatives in the United States and Canada.

One coach of the train was fitted out as a cinema, showing films of scenic and commercial attractions of the United States and Canada.

In addition to a display of American forest greenery outside the train, two coaches were given over to the promotion of the United States. These coaches were decorated in line with the modern decor which was standardized throughout the train. Pictures of major U.S. scenic attractions including the Grand Canyon, Niagara Falls and the White House were displayed, along with printed ephemera to provide a flavor of American entertaining. These included theatre tickets, show programs and printed match books.

Each U.S. coach contained an inquiry desk staffed by the Cherokee Indian and a Nat'l Park Ranger.

Cooperating with the British Overseas Airways Corp., in sponsorship of the exhibition were USTS, Eastern Airlines, American Airlines, Air Canada, Avis Rent-a-Car and Greyhound International.

—United States Travel Service

WEST TO BRITAIN—*A little touch of the American West, as a Wells Fargo Express wagon pulls into London. Foreground from left are C. S. A. Ritchie, Canadian High Commissioner; Keith Granville, chmn., British Overseas Airways; Min. Joseph N. Green, Jr., American charge d'affair.*

BRITISH LASSIE FINDS FRIEND—*A forest ranger captivates British lassie with history of American cowboys and Indians during an American tourist promotional trek across Great Britain.*

STUDYING SHIPBUILDING—*Members of the Commission on American Shipbuilding shown at an organizational session are from left, Stanley Powell, John T. Gilbride, Andrew E. Gibson, Chairman, Albert G. Mumma, John H. Lancaster, W. H. Krome George, Charles A. Black, and Arthur M. Becker.*

Panel Studies Future Of U.S. Shipbuilding

A Presidential Commission on American Shipbuilding began last month a review of the nation's shipbuilding industry.

The seven-member panel, established under the Merchant Marine Act of 1970, defined its chief task at an organizational meeting in Washington. The commission will attempt to determine whether the U.S. shipbuilding industry can increase its efficiency by fiscal 1976 to a level which will enable the ship construction differential subsidy to be reduced to 35 percent of the U.S. construction costs.

Under the Merchant Marine Act of 1936, the government has been authorized to pay up to 55 percent of domestic construction costs for eligible ships used in foreign trade. During fiscal 1971 the subsidy ceiling will be 45 percent.

The commission will make recommendations to the President on the course of action to be taken by the government and the industry to improve the competitive position of U.S. shipyards in world markets (See article on page 12).

The Merchant Marine Act of 1970 provides for as many as 300 modern, highly productive merchant ships to be built in American shipyards over the next ten years.

Members of the commission, appointed by President Nixon, are Chairman Albert G. Mumma, Short Hills, N.J., chairman of the Worthington Corp.; Andrew E. Gibson, Assistant Secretary of Commerce for Maritime Affairs; Stanley Powell Jr., San Anselmo, Calif., private consultant; Arthur M. Becker, Bethesda, Md., attorney; Charles A. Black, San Mateo, Calif., national secretary-treasurer of the National Marine Engineers Beneficial Association; W. H. Krome George, Sewickly, Pa., president and director, Aluminum Company of America, and John T. Gilbride, Greenwich, Conn., president, Todd Shipyards.

John H. Lancaster, of the Maritime Administration's office of Ship Construction, has been named acting executive director of the new Presidential Commission.

—*Maritime Administration*

Impact Of Shipping Projected By Industry

"Future uncoordinated growth of containerization might prove detrimental to ship and port profitability, non-containerizable shipper convenience, and inland carrier efficiency," according to a research report released by the Maritime Administration.

The report, "The Impact of Containerization on the U.S. Economy," details present and projected future status of containerized shipping in U.S. foreign policy. It was prepared by the Matson Research Corp., of San Francisco.

The two-volume report explores the economics of container transport, existing and projected facilities and services and the regulatory environment affecting containerization and its growth.

The U.S. container fleet will maintain its dominant position in trade through the mid-1970's, the report forecasts.

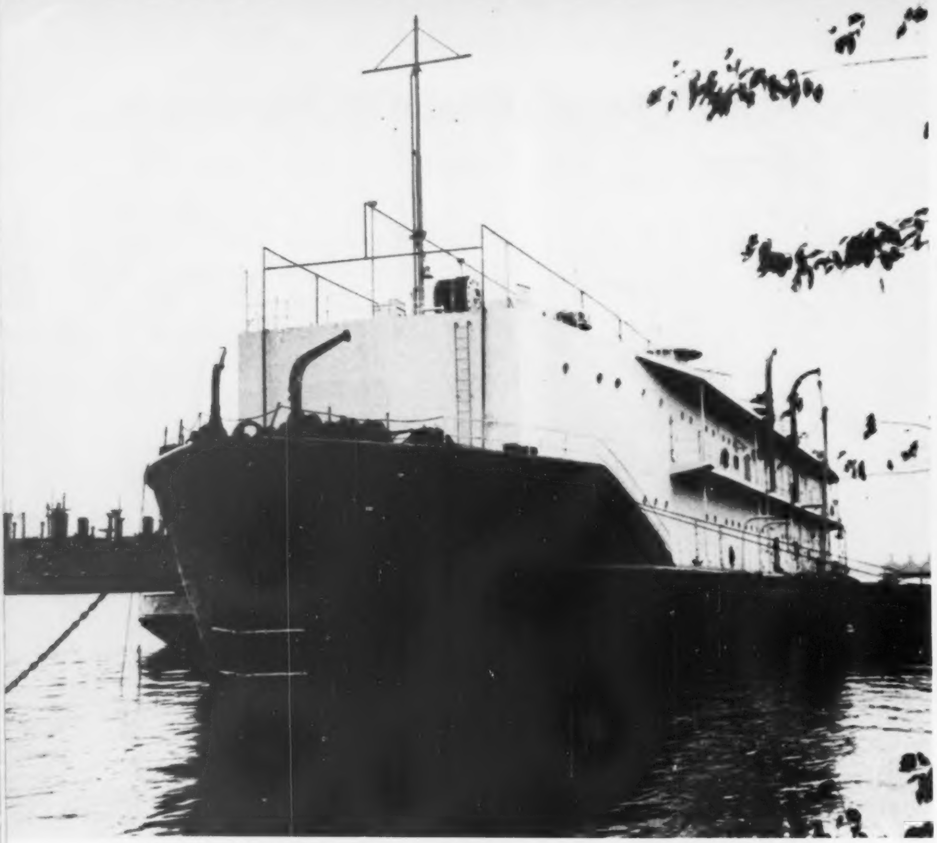
U.S. ports, according to the report, are also faced with the same basic problem—too much capacity for the amount of container traffic that is projected to be moving in coming years.

For inland carriers the situation is reversed. The report notes that rail and truck operators have little desire to develop regular services for foreign trade containers which are a very small part of domestic cargo movements.

A solution to the problem of overcapacity would be to increase the amount of containerizable cargo actually carried in containers and through deeper penetration by ocean-carrier marketing efforts into inland areas, the study states.

The study also sees development of a true intermodal transportation system, including through rates and single-carrier responsibility, as a means of averting the problems containerization's growth may involve.

—*Maritime Administration*



FLOATING SCHOOL—*The Maritime Administration resurrected this barge from "moth balls" to become a floating education training and health center for the Office of Economic Opportunity in the Virgin Islands.*

WW II Barge Joins Poverty Battle

An old Maritime Administration barge has been resurrected from the "moth ball fleet" and is on her way to becoming part of the Nation's anti-poverty program in the Virgin Islands.

Launched in 1945 as a sea hotel for the crews of U.S. Navy ships undergoing repair, the 260-foot vessel was donated by the Maritime Administration last October to the Office of Economic Opportunity. She will become the first floating educational training and health center at Charlotte Amalie on St. Thomas.

Late last year the barge was towed by the U.S. Navy from Staten Island to Mount Pleasant, South Carolina, to undergo renovation and refitting, funded by a $150,000 OEO grant.

With her quarters converted to classrooms, offices, machine shops and health facilities, the barge will serve as a vocational school and as a medical and dental center. She also will house the Virgin Island's community action program.

The Eastern Region Director of the Maritime Administration, Captain Thomas A. King, who found the unusual craft for OEO from among the vessels under his jurisdiction, said the barge's structure was easily adaptable to the needs of the project.

"It is not often," Captain King pointed out, "that the Maritime Administration has the opportunity to contribute to causes of this nature, as our functions are all merchant marine oriented. Under the present circumstances, however, there was a very special need, and, we are happy to be the agency that can satisfy this need."

—*Maritime Administration*

Check For $139,900 Starts New OMBE Unit

A new affiliate of the Office of Minority Business Enterprise (OMBE), in Baltimore, was formally launched at a ceremony February 25 in the office of Secretary of Commerce Maurice H. Stans.

At the ceremony, Secretary Stans presented a check for $139,900 to Ralph J. Ross, Director of the affiliate. The check represented a grant by the Economic Development Administration (EDA) to assist in setting up and maintaining the business development program, one of the first of its kind. The applicant for the grant was the Morgan State College of Baltimore.

Present at the ceremony, besides Secretary Stans and Mr. Ross, were: U.S. Representative Parren J. Mitchell of Baltimore; Dr. King Cheek, President of Morgan State College and brother of James Cheek, President of Howard University in Washington, D.C.; Dr. Cleveland Chandler, Chairman of the Department of Business and Economics at Morgan State College and Project Co-Director of Operations of the new affiliate, and Dr. Carl M. Franklin, Professor of Management at Morgan State College and Project Co-Director of Programs of the new affiliate.

Morgan State will supplement the EDA grant with $47,251 from other sources to provide the $187,151 total cost of maintaining the affiliate for one year.

The business development program will be carried out jointly by the following departments of the college: the Department of Business and Economics and the Morgan Ownership-Management Development Institute.

The funds will be used to provide technical assistance and management information to minority entrepreneurs in Baltimore. A one-stop, street level office will be staffed to give multi-service counseling

ALL THE WAY TO WASHINGTON—*To honor the two new governors who joined the Coastal Plains Regional Commission, the quarterly meeting of the Commerce Department Commission was held in the Nation's Capitol last month. A complete review of the CPRC's plans, recommendations and projections were made in Secretary Stan's offices. Attending the conference were (left to right), G. Fred Steele, Jr., CPRC Federal Cochairman; Tom Linder, State Planning and Community Affairs Officer and Alternate to Governor Jimmy Carter of Georgia; John C. West, Governor of South Carolina; Stans; and Robert W. Scott, Governor of North Carolina. Governors Carter and West are new members.*

to existing local business development organizations and community groups, and in this way to help minority business men establish or enlarge enterprises.

The Baltimore affiliate office will be an addition to the more *than* 25 such affiliate offices established for a similar purpose throughout the nation since the affiliate program was set up in July 1970.

—Office of Minority Business Enterprise

Prescription Sales On The Increase, Says Census Survey

Pharmacies are busy places, and they're getting busier—

In fact, America has become pill conscious, according to the results of a Census Bureau survey on U.S. drug stores.

During 1967, drug stores in the United States reported sales totaling $10.3 billion, and $8.5 billion of this money was spent for prescriptions. For that year, reporting pharmacists filled nearly 706 million prescriptions.

Comparing the number of prescriptions sold with the number of persons in the United States, this averages three bottles of RX medicine per person.

California led all States in the number of prescriptions filled—65 million prescriptions, close to 9 percent of the total sold. New York was a close second with 8 percent, followed by Texas with 6.4 percent; Illinois, 6.2 percent; and Pennsylvania, 5.7 percent.

Pharmacists—over two for each drug store—were busy during 1967. Each one filled nearly 10,000 prescriptions on the average—2,500 more than they mixed in 1963, the year of the previous Census of Business. Since the survey did not reach single-owned, one-man operations, but only drug stores with a payroll, the number is probably even higher.

Not all drug store employees, of course, are pharmacists. The total employees per drug store averaged more than eight full or part-time workers—an understandable figure, since the modern drug store also sells everything from pins to paint.

The Census Bureau survey on U.S. drug stores covered 46,244 stores, of which 34,652 pharmacies reported prescription sales.

—Census Bureau

Franchising Potentials Identified In Report

U.S. companies with franchising opportunities available to qualified persons regardless of race or national origin are identified in the sixth annual edition of "Franchise Company Data for Equal Opportunity in Business," a publication of the Department of Commerce.

The publication provides the name and address of 274 companies dealing in franchising, a description of the operation, number of franchisees, equity capital needed, financial and managerial assistance available, and training offered.

It also includes general information on franchising, suggestions and checklists to assist and protect the potential investor. Governmental and private organizations that can help minority group entrepreneurs are also identified.

The publication was prepared by the Bureau of Domestic Commerce. It is available without charge from Sales and Distribution, Department of Commerce, Washington, D.C. 20230, and Commerce's 42 Field Offices.

—Bureau of Domestic Commerce

Rate Of Mobility Remains Constant For Two Decades

When you make out your Christmas card list next fall, you will probably find that one out of every five addresses has changed during the year. This is the proportion of Americans who move each year, and the percentage has changed very little since 1948.

This mobility rate has stayed in a range from 18.3 percent to 21 percent over the past 22 years despite better communication and transportation links among various sections of the country which both encourage transfers and make it easier to move.

Population movement

Some 36.5 million persons, or 18.4 percent of the population, moved during 1970. The figures, published in the Census Bureau's Population Characteristics, part of the Current Population Reports series, show that mobility rates are highest among those in their early 20s—the age when people leave their parental homes and are in the process of completing their education, finding suitable employment and setting up households of their own. Almost half (44.5 percent) of those in the 22-24 age group moved during the year.

As would be expected, persons married during the survey year had the highest mobility rate—83.8 percent.

A change in job status appears to be one of the major reasons for changing one's address. This includes both those who change jobs voluntarily and those who lose their jobs. Those who were unemployed at the time of the survey and those who had worked less than 50 weeks during the previous year had significantly higher mobility rates than those who were employed throughout the year.

The report also revealed:

- Negroes had a higher mobility rate than whites. The total number of Negroes changing their address during the year was 21 percent of the black population, compared with 18 percent for whites. However, this movement was for the most part local—within counties, where 16.6 percent of Negroes moved and only 11 percent of whites. Between counties and between states, whites had the highest migration rate.
- Male white-collar workers had higher migration rates, but lower local mobility rates than the male blue-collar workers and service workers combined.
- Men with incomes less than $7,000 moved more than men whose incomes were higher. This could have been an age, rather than an income, effect, however, since young men, who typically have high mobility rates, also have below-average incomes.
- Central cities in metropolitan areas showed an exodus to the surrounding suburbs, showing a greater local residential population turnover in standard metropolitan statistical areas.

The report also suggests that occupation, education and income are indicative of a somewhat less consistent relationship to the various types of mobility. Local moves are about the same for persons with or without college education, but college-educated migrate to other parts of the country more than those with a high school education or below. The higher mobility of the college-educated partly reflects a greater tendency to seek employment on a national basis and, in some cases, to gain additional education.

The report, "Mobility of the Population of the United States, March 1969 to March 1970", Series P-20, No. 210, may be obtained by sending 50 cents to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. —*Census Bureau*

Calendar For Businessmen

March 30—Kansas City, Mo.—Input-Output Conference, sponsored by Commerce and Society for Advancement of Management. Contact John Kupfer, Kansas City Field Office.

April 2—Philadelphia—Census User Conference. For information contact Mrs. Shirley Komoroff, Department of Commerce Field Office, Philadelphia.

April 12-13 — Washington, D.C. — 11th Annual Washington Conference on Business-Government Relations at Shoreham Hotel, sponsored by the American University Center for the Study of Private Enterprise. For information contact Jimmy D. Johnson, director.

Selling To Government Is Topic Of Seminars

Seven seminars in April and May will provide minority businessmen with information on how to sell to the Federal government through competitive bidding and other programs.

Federal procurement officers will conduct day-long sessions of lectures and individual counselling. The conferences are sponsored by the Federal Procurement Task Force on Minority Business Enterprise, which includes the Regional Business Service Centers of General Services Administration, Department of Defense, the Department of Commerce's Office of Minority Business Enterprise and the Small Business Administration.

Conferences are scheduled for:

Columbia, S.C.	4/8
Jacksonville, Fla.	4/13
Tampa, Fla.	4/16
San Juan, Puerto Rico	4/27
Ponce, Puerto Rico	4/29
Houston, Texas	5/25
Corpus Christi, Texas	5/28

—*Office of Minority Business Enterprise*

SCIENCE & TECHNOLOGY REPORT

- **'Tornado trap' to delve mystery of killer storms**
- **Patents approves 380 anti-pollution applications**
- **U.S. commercial whaling ends by Stans move**
- **Mexican weather station to improve U.S. storm warning**
- **Marine forecasting system will benefit Great Lakes boaters**

'Tornado Trap' To Delve Mystery Of Killer Storms Hitting Nation

How do tornadoes develop? What storms produce them and what do not? Is it possible to identify enough of the characteristics of a large thunderstorm to determine when it will likely produce a tornado?

To try to find answers to these and other mysteries of the tornado, scientists of Commerce's National Oceanic and Atmospheric Administration have set up a "tornado trap," or a network of sophisticated instruments, in the Oklahoma plains sometimes visited by the tornado, the most violent of all storms.

With the approach of spring, the season when tornadoes usually occur most frequently, the network is to be set up again. This year it will consist of 10 surface observing stations. In past years it has covered an area of up to 7,000 square miles. The network was devised by NOAAs' National Severe Storms Laboratory at Norman, Oklahoma, in the laboratory's effort to broaden man's knowledge of the killer storms.

Tools used in the laboratory's research program include aircraft, ground radar, ground-based cameras, satellites, and miniature radio transmitters that are carried aloft by balloons. Some instruments are placed on a 1,500-foot high TV tower near Oklahoma City. The instruments provide a variety of information about air motion, temperature, water vapor distributions and other data useful in storm research. They paint a fairly complete picture of a storm's

ON-THE-SCENE SPOTTING—*A key factor in the SKYWARN campaign is the work of police, civil defense and other community agencies in spotting impending or actual tornadoes.*

TWIN DESTROYER—*Tornadoes can come in pairs such as these twin funnels which struck Elkhart, Ind., several years ago.*

life, of its birth, growth and decline.

The instrument network was in operation April 29 and 30, 1970, when a series of severe storms blew through the plains area. Of eight storms separately identified by radar, six passed through the network. Shortly after entering the network, one storm reached tornado strength and produced an almost continuous path of tornado damage about a quarter of a mile wide. It gave scientists documented data on conditions inside a tornado.

In six years of operation, only four of the surface observing stations in the network have recorded 100-mile-an-hour winds in the destructive part of the tornado. This does not mean that tornadoes do not produce much stronger winds. Tornado wind velocity is believed at times to exceed 250 miles an hour.

Separate and apart from the Oklahoma research program is the Skywarn tornado safety campaign, maintained by the National Weather Service, an agency of NOAA, in the effort to save lives. The Weather Service, formerly the Weather Bureau, has already launched the Skywarn campaign for 1971. The Weather Service uses a two-stage system to alert people to the danger of tornadoes, the watch and the warning. The watch says that within specified areas atmospheric conditions may produce tornadoes, even though none has been sighted. The warning announces that a tornado has been spotted, visually or on radar.

Most tornadoes are first sighted by private citizens, often police officers or other public-spirited volunteers who are organized by local weather stations and serve as the "eyes" of the Weather Service over large areas of the country. They report the presence of tornadoes to the Weather Service or other official warning centers. The warnings are then communicated to people in the threatened areas.

The number of reported tornado deaths has dropped over the last 40 years, according to NOAA's Environmental Data Service. From 1930 to 1949, an average of 222 deaths a year occurred from tornadoes, while in the 1950-70 period the average was 118 a year. In 1970, 650 tornadoes struck the United States, and 73 persons were killed. In contrast to the decline in tornado deaths, property damage from tornadoes has increased sharply. Since 1965, the annual tornado damage in the United States has soared to $50 million or more, while previously it reached that figure only twice—in 1953 and 1957.

Knowledge gained thus far about tornadoes from various sources indicates that they are characterized by an inner region where winds decrease toward the center and an outer region where winds fall off with increasing distance. Tornadoes generally are accompanied by lightning and other electrical phenomena although their characteristics are highly variable. The tornado cloud itself differs greatly in size and shape. In some photographs it appears smooth, in others greatly irregular and turbulent.

The average tornado leaves a

path about one-eighth of a mile wide and 5 miles long. But some spectacular twisters have ploughed areas of destruction a mile wide and 300 miles long. The peak months for the appearance of these storms are April, May and June, but they have appeared in every month. They occur most frequently in the warmer hours of the day, or between 4 and 6 p.m., but they may strike at any hour. No state is immune from them.

Tornadoes wreak destruction through the combined action of their fierce rotating winds and the partial vacuum in the center of the vortex. While the winds twist and rip at a building, the abrupt air pressure decline inside may cause walls to collapse or topple outward and windows to explode. The effects often are fantastic. Tornadoes have made deadly missiles of pieces of straw, sometimes driving them into the sides of buildings. They have lifted heavy objects like railroad cars and machinery and hurled them for considerable distances.

Scientists explain that tornadoes actually are a meteorological detail in the circulation and energy balance of a large thunderstorm. As a result, a great deal of research related to tornadoes is really storm research.

As knowledge of tornadoes increases, efforts are intensified to develop models of storms in the laboratory, both of a physical and mathematical nature. Mathematical models at present are highly simplified. In these models, the tornado itself is considered to be a stylized, symmetrical cylinder.

Many questions about tornadoes remain unanswered, scientists point out. For example: Are wind flows upward or downward in the core of the tornado funnel? How is tornado behavior, such as funnel "skipping" or the lifting and descending motion, related to the underlying terrain? What is the wind inflow angle, air pressure, and temperature at various distances from the visible funnel? How does the wind vary with the height and the vicinity of tornadoes?

Dr. Edwin Kessler, Director of the National Severe Storms Laboratory, says: "At NSSL and other NOAA research laboratories our special interest in tornadoes is related both to their awesome effects and to their intriguing dynamic properties which, if properly understood, should contribute to advancing weather knowledge on all fronts. . .

"We do know that tornadoes occur in air masses that are relatively warm and moist near the ground and cool aloft. Also, other conditions, such as vertical shear of the horizontal wind and large-scale ascending air motion are usually present.

"Knowing just this much about tornadoes, we can conceive of altering the atmosphere to reduce the probability of tornadoes by heating the air in the mid-troposphere and reducing its overturning instability."

Will it ever be possible to tame the tornado, to spot its development before it happens and to prevent it from occurring?

If the budding storm covered a 10-square-mile area, according to scientific calculations, 200 million kilowatt-hours of power would be needed to raise the mid-layer temperature one degree Centigrade. This amount of power, if delivered in one hour, would require the combined output of all power generation stations in the United States and would cost two million dollars at the lowest cutrate cost.

"Of course," Dr. Kessler explains, "having the power would not be enough. The nature of a system to select the critical airmass and to deliver the power taxes our imagination. Furthermore, our 10-square-mile storm is very conservative. Many tornado-spawning storms cover about 400 square miles and entrain air from a region more than 10 times larger."

Scientists say that, in the face of the weather's awesome power, the most logical way to modify severe

RADAR DETECTION—*When atmospheric conditions are right for tornadoes, weathermen keep a sharp eye for squall lines, hooks, and other tell-tale signs.*

RADIOSONDE LAUNCH—*Conditions in the upper atmosphere over a particular locality are best measured by launching radio transmitters attached to balloons.*

weather would appear to be turning nature's power against itself. Silver iodide and similar chemical cloud seeding agents can raise the surrounding temperature by stimulating the freezing of airborne water. With continued research, observation, and detailed analysis of actual storm systems, it is hoped, the National Severe Storms Laboratory's research may some day discover how to apply a little heat in the right place at the right time to alter storm development in a beneficial way.

"While we are far from being able to stop a tornado, we are somewhat nearer an understanding of storm and tornado mechanisms," Dr. Kessler concludes. "Continued technological advances hold the key to further advances in weather services of all sorts.

"The photographs from the earth-synchronous Applications Technology Satellite contain significant information on weather developments over half the earth. The intensity of rain areas and their associated storm hazards can be estimated from quantitative radar data and such estimates can be used for managing water resources, controlling air traffic, and warning of severe storms. We are greatly challenged to combine such modern sensors with means for effectively and economically communicating and processing their information in an improved national system for severe local storm warning and monitoring."

—*NOAA*

Patents Approves 380 Anti-Pollution Applications Under Priority Program

Since its inception a year ago, the Patent Office's program of granting priority to anti-pollution inventions has resulted in the approval of 380 patent applications for accelerated processing.

"We are completing examination and processing of these applications within eight months as compared to the normal average of two and a half years," Patents Commissioner William E. Schuyler, Jr., reports.

"However," he adds, "the Patent Office is issuing many more anti-pollution patents than these figures indicate. Since priority processing must be requested by the inventor in order for us to immediately identify a patent application of this type, many applications are passing through the regular examination procedures. More than 700 patents which relate to the environment actually have been issued during the past year."

Under the new program established by Presidential directive to focus national attention on the pollution problem, any industrial or independent inventor with a device which can aid in improving the environment may obtain priority processing of his patent application by requesting it.

Anti-pollution patents being issued have possible utilization in many fields of technology. In a typical recent week, patents issued included: sterilizing waste on boats, gas scrubbing apparatus, waste water treatment, litter disposal unit, reclaiming paving material, refuse sterilization system, process for the entrapment of sulfur dioxide gas, combination of a hydrocarbon conversion process with a waste water treating process, and a fumes burner.

Commissioner Schuyler said he is satisfied that the priority processing program is helping to focus the attention of both independent inventors and industry's thousands of scientists and engineers upon the pollution problem, but that the difference between the number of anti-pollution patents granted and the number of inventors requesting priority processing indicates many inventors still are unaware of this special program.

"The faster processing which is assured by the priority program has at least two important results," he stated. "First, we get these inventions into use by industry at an earlier date. Second, we make the new knowledge available to other inventors much sooner than we would if the applications had to take their normal turn in the regular examination and processing cycle. Information in a pending application is not disclosed, in order to protect the inventor's interests, but once a patent is issued, the information is available to anyone. The manufacture and use of the device is the property of the inventor, but each invention creates new technical knowledge which may be the basis for further advancement."

U.S. Commercial Whaling Ended By Stans Move

Commercial whaling ended in the U.S. last week when Secretary Stans moved to protect the remaining species of whales still in existence.

He directed the National Marine Fisheries Service to publish a proposal in the Federal Register terminating the licensing of commercial hunting of whales listed as endangered species. The list contains eight species, including the finback, sei and sperm whales, which are the only species now sought by U.S. commercial whalers, as well as the rarer bowhead, blue, humpback, right and grey whales.

The whales were classified as endangered species by the Interior Department last December.

Secretary Stans said that although the Commerce Department is vitally concerned with the economic health of all U.S. business, it is also firmly committed to sound conservation practices.

The Secretary's action marks the final chapter of an industry which first originated along the New England coast in the early colonial days reaching its highest activity during the first half of the 19th century. Domestic whaling has been on the decline since the beginning of the 20th century but this is the first time in almost 300 years that no whaling ships will be operating from this country.

MOSES Enters Phase I Under NOAA Grant

Project MOSES is about to enter Phase I. Preliminary design of the Manned Open Sea Experiment Station for conducting applied research will be the task of the Oceanic Institute at Waimanlo, Hawaii, as part of the National Sea Grant Program.

A grant of $61,350 was awarded to the island Institute by Commerce's National Oceanic and Atmospheric Administration for a station which will serve as a platform for projects leading to utilization of sea resources. Experiments will be conducted in collecting and harvesting fish, monitoring deep-sea and open-sea pollution and in making small areas of the ocean surface more fertile by bringing up cold nutrient-rich water from the ocean depths.

When Phase I is complete, decisions on further phases will be made covering construction of a platform and beginning research programs.

The platform required to house the planned studies may include features such as a laboratory near the bottom of the structure allowing an underwater view, and an elevator carrying scientists between the platform's levels.

—NOAA

Mexican Weather Station To Improve U.S. Storm Warning

A cooperative weather station established by the U.S. and Mexico on Guadalupe Island off the coast of Lower California is expected to provide improved warnings of storms threatening both countries.

The jointly-funded station on the Mexican-owned island is to make upper air observations filling a long-recognized need for atmospheric data from an ocean area that generates severe weather for both countries. The station culminates several years of negotiations.

Building materials and equipment for the new station, supplied largely by the U.S., were transported to the island by a Mexican minesweeper, ferried ashore on an improvised raft, then packed in on foot since the 18-mile long island has no roads or vehicles.

Upper-air reports are being made from the island and transmitted to the National Meteorological Center in Suitland, Md., by Mexican personnel who make upper air observations twice daily. These reports are expected to offer valuable clues to the high-level steering currents which propel moist air inland from the Pacific and the Gulf of Mexico.

—NOAA

Marine Forecasting System Will Benefit Great Lakes Boaters

Fishermen and recreational boaters on the Great Lakes will have this year an improved marine forecast and warning service of thunderstorms and squalls that yearly endanger and cost lives.

The National Weather Service of Commerce's National Oceanic and Atmospheric Administration is incorporating the radio into an improved marine forecast service, localizing small-craft advisories and providing for the issuance of short-fuse warnings.

The Great Lakes boating season begins April 1. By that time the Weather Service will inaugurate a "Special Marine Warning Bulletin" to alert boaters to severe local storms or strong winds expected to last two hours or less. The Bulletins will be dispatched by radio and teletypewriter; because they cover weather and sea conditions which usually develop suddenly, no visual warnings will be used.

The "Small Craft Advisory" will replace the "Small Craft Warning" in the Great Lakes region. Advisories will report weather and sea conditions within five miles of shore which are expected to last over two hours and may be hazardous. Radio and teletypewriter messages and visual displays will be used to notify boaters of anticipated conditions.

The Weather Service will continue to issue gale and storm warnings and its daily recreational boating forecasts for the Great Lakes as in the past. *—NOAA*

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

Three-dimensional portraits. A method that extends holograms to close-up three dimensional porraits in color or black and white, and makes possible the taking of such pictures a few inches from the human face. Ordinarily, in making a hologram, laser beams are directed simultaneously at the subject and at the photographic plate. In the new process, one beam shines through the plate at the object and is reflected back for interference with the other, or reference, beam. Patent No. 3,561,838 issued to Dr. Dennis Gabor, Stamford, Conn. and assigned to C. B. S. Laboratories.

Artificial reef. An artificial reef in which fish can take refuge which consists of a hollow, open-ended body made of synthetic resins weighted so that it will sink. The reef may be in cylindrical or prismatic form. Patent No. 3,561,402 issued to Shinichi Ishida of Tokyo, Japan and two co-inventors.

Electronic organ. An electronic organ played by finger pressure on the notes. A score resembling a page of sheet music is placed on the instrument and serves as a keyboard. The operator, who need not be a musician, touches the semiattached notes in the order of their position which closes a series of switches. Patent No. 3,562,394 issued to Paul E. Kiepe of Boise, Idaho.

Locating marine animals. A try net is provided with an acoustic-electrotransducer which transmits electrical oscillations to a remote filter device. The filter device is tuned to isolate the characteristic vibrations produced by selected marine animals and the signals from the marine animals such as shrimp are transmitted to an indicator. Patent No. 3,561,150 issued to Albert B. Silchenstedt, Box 255, Rockport, Texas 78382.

Wave generating apparatus. An apparatus for generating waves in small land bodies of water such as lakes, or large pools for surfing. The wave generating apparatus includes means for defining the surfing area with a pair of vertical walls with one of the walls being substantially straight and the second diverging from the first to enhance wave characteristics, and extending toward a beach area. A surge generating device is located in the area where the first and second walls are parallel for imparting motion to the water. Patent No. 3,557,559 issued to Douglas W. Barr, 5420 Irving Ave., S., Minneapolis, Minn., 55419.

Drinking fountain cooling chamber. A drinking water cooling apparatus having a series of refrigerant cooling coils wrapped about the cooling chamber with a temperature control well arrangement for receiving a capillary temperature sensing element. Patent No. 3,561,228 issued to Eugene W. Scott, Columbus, Ohio, and assigned to Westinghouse Electric Corp. of Pittsburgh, Pa.

Abstracts and drawings of patents are published as they are issued in the *Patent Official Gazette* each Tuesday. More than 1,800 patents are issued each week. Trademarks are published in the *Trademark Official Gazette*. Copies of the *Patent Official Gazette* and the *Trademark Official Gazette* may be obtained from the Supt. of Documents, GPO, Washington, D.C.

Science Calendar

March 22-23—Gaithersburg, Md.—National Bureau of Standards. Second National Conference on Roofing Technology. Cosponsor: National Rooflng Contractors.

April 18-22 — Alexandria, Va. — Fourth Annual Meeting of the National Conference of States on Buildin Codes and Standards. Information: Robert M. Eisenhard, NBS, 301-921-3447.

April 20-23—Orlando, Fla.—Fifth Florida Industries Exposition Inventors Congress. Produced in cooperation with Commerce's Office of Inventions and Innovations, National Bureau of Standards, and the Patent Office.

April 27 — Philadelphia — National Bureau of Standards Seminar at Franklin Institute Research Laboratories, 20th and Benjamin Franklin Parkway. Cosponsored by Commerce and the Institute.

May 10-14 — Gaithersburg, Md. — National Bureau of Standards conference on: Flow—Its Measurement and Control in Science and Industry. Cosponsors: American Institute of Physics, American Society of Mechanical Engineers, ISA.

May 24-26 — Gaithersburg, Md. — National Bureau of Standards. Fourth Joint Meeting of Operations Researchers. Cosponsors: College on Logistics of the Institute for Management Sciences; Mathematical Society of America, American Society for Cybernetics, American Society for Public Administration, Association for Computing Machinery, Operations Research Society.

June 16-18—Gaithersburg, Md.—National Bureau of Standards, Summer Symposium in Analytical Chemistry. Cosponsor: American Chemical Society.

June 21-24, 1971—Washington, D.C.—Fifth Symposium on Temperature, Its Measurement and Control in Science and Industry, Sheraton Park Hotel. Sponsors: American Institute of Physics, the Instrument Society of America, and the National Bureau of Standards.

March 8, 1971

International Commerce

- U.S. trade performance in 1970, analysis by area
- Report on Mid-America World Trade Conference
- Swedish economy now in leveling-off period
- Australia in search for new technology
- Opportunities open abroad to exhibit, invest, sell

Builders Push Canada Upturn; Toronto Has World's Busiest Pace

See Page 42

Newsmemo

General Motors' new compact Vega made its Swedish debut recently at the Stockholm U.S. Trade Center at a between-regular-shows promotion. It was the first time GM had put together a presentation to the Swedes that covered solely American-built models. The company's Swedish distributor was so pleased with attendance and sales that he intends to repeat the event each year.

It was Mini-Computer Fortnight at the London U.S. Trade Center. So many American firms wanted to put their systems before U.K. customers at a Trade Center exhibition that two shows were held, in successive weeks. The back-to-back events had a high percentage of new-to-market firms. Sales by the 70 exhibiting firms: $2.6 million at the shows, and an expected $30.5 million in follow-up orders over the next year.

Now in its twelfth year is the summer program of the International Marketing Institute, to be held July 5-Aug. 14 on the Harvard Graduate Business Administration School campus. More than 1,200 management officials and educators have attended the course, which is followed by a six-week plant study tour. A separate course for professional women is also conducted by the institute, 16 Garden St., Cambridge, Mass. 02138.

Another sign of growing U.S. business interest in East-West trade is a March 16-17 seminar on the subject being organized by the Institute for International Commerce at the University of Michigan. Sessions will treat ways of making business contacts, products in demand, payment arrangements, and U.S. export license details. Commerce Department is represented on the speakers' panel.

Looking at the total picture of world trade from their Geneva vantage point, GATT specialists see too many ifs to offer a firm assessment of price trends in the year ahead. They venture the following: "All in all, it is rather unlikely that in 1971 as a whole export prices will rise by less than 2 percent or more than 4 percent." GATT foresees world trade growth this year of 5-7 percent in volume.

The marketing practice called franchising--what does it really entail? Businessmen in Tokyo, Tapei, Hong Kong, Manila, Wellington and Sydney will get answers to this question at seminars conducted by the consultant firm of Aaron Rothenberg Associates in their cities this spring. It's a preamble to the Pacific Nations Franchise Trade Mission that leaves Los Angeles under American Express guidance on May 15.

International Trade Winds

PROCESS EQUIPMENT—Fuller Co., Catasauqua, Pa., has been awarded a contract by Agregados Livianos C.A. to supply the major equipment for the Venezuelan firm's new lightweight aggregate plant. Fuller, a subsidiary of General American Transportation Corp., will supply a kiln, cooler and other equipment under a $700,000 contract.

TIMBER—Georgia-Pacific Corp., Portland, Ore., is beginning development of a major equatorial hardwood timber concession on Kalimantan (Borneo), large Indonesian island. The concession covers about 800,000 acres of rain forest. The development program includes employee housing, road system, timber harvesting, and finally lumber, veneer and plywood operations. Training programs for Indonesian workers are already in progress.

STEEL—S.A. Coppee-Rust N.V., Brussels affiliate of the Rust Engineering Co., Pittsburgh, has provided studies, engineering, procurement and installation supervision of an electric steelworks at Genk in collaboration with Allegheny-Longdoz N.V. The plant, a $9 million investment, will have an initial capacity of 60,000 tons per year.

TELECOMMUNICATIONS — The U.K. subsidiary of New York-based General Telephone & Electronics Corp., GTE International Inc., announced jointly with Thorn Electrical Industries Ltd., London, the formation of three new companies and the acquisition of a fourth. The new concerns are Thorn-General Telephone Ltd.; GTE International Ltd., and GTE Information Systems Ltd. GTE International Ltd. acquired Datatech Industries Ltd., Feltham, Middlesex, a manufacturer of data communications products.

INDUSTRIAL EQUIPMENT — The Carborundum Co., Niagara Falls, N.Y., is expanding its Far East operations with the formation of a new company in Taipei, Taiwan, and a wholly-owned subsidiary in Tokyo. The Taipei firm will produce bonded abrasive grinding wheels and is a joint venture with Tzu Jan Chemical Works. The new firm, Carborundum Tzu Jan Industrial Co. Ltd., will receive technical assistance and product know-how from the U.S. partner. The new Tokyo subsidiary, Carborundum (Far East) Ltd., will serve as a liaison with Carborundum's Japanese interests and will explore further Pacific expansion opportunities for the firm.

U.S. Trade With Most World Areas On Uptrend

Most major world areas shared in the rapid expansion in U.S. foreign trade last year. The exchange of goods with both developed and developing regions increased at a faster rate than in 1969, with the two groups sharing in the trade growth roughly in proportion to their weight in the total.

Almost two-thirds of the more than $5 billion expansion in U.S. exports—to $42.7 billion excluding military grant-aid—consisted of larger deliveries to the developed countries. These nations also accounted for the major portion of the $3.9 billion import advance which pushed the level of our total foreign purchases to $40 billion.

The increase in the merchandise trade surplus from $1.3 billion in 1969 to $2.7 billion last year resulted from improved trade positions with both the developed and developing nations. Among the former group, the surplus with Western Europe increased substantially, while the deficit with Japan shrank slightly. The larger trade surplus with the developing nations resulted primarily from a more favorable balance with the American Republics and with East and South Asia.

Increased sales to Western Europe and Japan, where economic activity was extremely buoyant, accounted for nearly all of the $3.4 billion advance in exports to these countries in 1970. Heavy investment spending and increased industrial production in the Common Market stimulated demand for U.S. products. Further, despite sluggish economic conditions in the United Kingdom, U.S. exports to that country rose strongly. The continued expansion of the Japanese economy led to an unusual one-third advance over 1969 in U.S. exports.

Exports to Canada level off

Following a sizable gain in 1969, shipments to Canada, our largest trading partner, leveled off last year. The sluggishness of deliveries mainly reflected a weaker Canadian economy and the effects of the auto strike.

Imports also rose rapidly from the developed areas to a total of $29.3 billion. Purchases from these countries reflected buoyant U.S. demand throughout the year despite the sluggish economy.

Arrivals from Japan and the European Economic Community countries, especially Germany, were particularly expansive. The sharp, one-fifth increase in arrivals from Japan included larger amounts of many products, notably automobiles, motorcycles, and sound recorders. Despite a drop in the quantity of steel imports, the value rose strongly because of higher prices. From the Common Market, steep advances were recorded in imports of automobiles and machinery, while lesser increases were noted in imports of footwear and textiles.

Exports to the developing areas accelerated sharply last year, climbing by 15 percent after a rise of only 4 percent in 1969. The advance reflected generally more vigorous economic growth in many of these countries, along with improved foreign exchange positions stemming from rising exports and higher basic commodity prices. For the first time since 1966, U.S. exports to the developing countries increased faster than those to the more advanced nations. Exports to the American Republics, which declined in 1969, showed a particularly steep rise.

Though imports from the developing countries climbed less rapidly than exports, their rate of growth was about double that in the preceding year. After declining in each year since 1960, the proportion of U.S. imports accounted for by goods from these regions held steady last year at about 26 percent. By comparison, this ratio stood at 40 percent in 1960.

Purchases from the American Republics and East and South Asia contributed the major part of the advance from developing areas.

The accompanying article on last year's U.S. exports and imports, by region, is the second of a two-part series prepared by the Commerce Department's International Trade Analysis Division. The first part, a detailed analysis of 1970 U.S. foreign trade, by commodity, was presented in the issue of Feb. 22.

Trade Gains Extend To Most Areas

Millions of dollars	Exports and reexports, incl. military grant-aid		Imports	
	Values in 1970	*Change from 1969*	*Values in 1970*	*Change from 1969*
Developed areas, total	**29,884**	**+3,405**	**29,262**	**+2,802**
Western Europe	14,465	+2,073	11,175	+1,037
Canada	9,084	− 53	11,091	+ 707
Japan	4,652	+1,162	5,875	+ 987
Australia, New Zealand, and South Africa	1,683	+ 223	1,121	+ 71
Developing areas, total	**12,989**	**+1,712**	**10,450**	**+1,077**
American Republics	5,696	+ 827	4,779	+ 565
East and South Asia	4,023	+ 528	3,402	+ 363
Near East	1,428	+ 84	371	− 12
Africa	936	+ 117	800	+ 38
Other developing areas	906	+ 156	1,098	+ 123
Communist countries in Europe and Asia, total	**353**	**+ 104**	**226**	**+ 29**

Month's Official Actions Topped By New Trade Bill

This article is another in a series of monthly reports outlining actions in Congress or elsewhere in Government, and by foreign or international bodies, affecting world trade, as noted by the Bureau of International Commerce's Office of International Trade Policy.

THE PRESIDENT

President Nixon, in his State of the World report to the Congress Feb. 25, stated that although Congressional failure to enact the Administration's trade bill, the near passage of protectionist legislation, the abnormal increase in imports caused by domestic inflation and the policies and practices of some major trading partners, and the slow pace of the international negotiations on trade barriers had contributed to the challenging of the traditional U.S. free trade policy, the Administration remains committed to the principles of free trade. After explaining why a liberal trade policy is indispensable to U.S. domestic economic health and to a successful U.S. foreign policy, the President reviewed steps taken during 1970 to further U.S. trade policy objectives, especially efforts to remove barriers against U.S. exports and to cushion the adverse domestic impact of trade. In conclusion, the President urged international cooperation in defending and encouraging liberal trade policies.

CONGRESS

Congressional action on trade and related matters was highlighted in February by the introduction in the Senate of a new trade bill (S. 834) as an alternative to the trade legislation reported out of the Senate Finance Committee during the last Congress (summarized in detail, *Commerce Today*, Nov. 2) and reintroduced by Senator Thurmond in the first days of the 92nd Congress (S. 4). Approximately 120 trade and related bills have been introduced in the 92nd Congress. About 50 were quota and orderly marketing bills for specific products or product groups and five were general orderly marketing bills, applicable when imports surpass stated levels of domestic consumption.

New Trade Legislation: On Feb. 17, a group of Senators, including Harris, Mondale, Percy and Javits, introduced the International Trade Act of 1971 (S. 834). The sponsors of the bill have stated that the legislation presents an alternative to "protectionist sentiment" by offering "constructive, responsive and comprehensive" legislation to "ease the domestic burdens of foreign competition and further the cause of expanded, open world trade." The bill contains no provisions for shoe and textile quotas, but contains provisions to establish fair and equivalent access to world markets, to afford relief from unfair and injurious imports, and to protect and promote exports.

To provide fair and equivalent access to world markets, the bill would give the President 50 percent authority to reduce tariffs in international negotiations and would authorize the President: to negotiate removal or reduction of nontariff barriers subject to Congressional approval; to implement the Kennedy Round agreement eliminating the American Selling Price system of customs valuation; to negotiate an international agreement establishing a clear definition of subsidies and imposing enforceable restrictions in return for adding an injury standard to the U.S. countervailing duty statute; and to negotiate commercial agreements with Communist countries with which the United States has diplomatic relations and to grant them most-favored-nation treatment on a selective product basis when the President determines that such an agreement is in the national interest. The bill also proposes express authorization for direct appropriations to the GATT.

Regarding protection against unfair imports, the bill would strengthen the existing provisions of law that deal with dumping, subsidization and other unfair practices in the importation of goods. In addition, time limitations for decisions and prompt judicial review of such decisions are proposed. To afford relief against injurious imports, the bill would: relax the qualification criteria of current escape-clause and adjustment assistance provisions; transfer determination of eligibility for adjustment assistance from the Tariff Commission to the Executive Branch; increase benefits to qualifying workers; and simplify procedures for obtaining and providing assistance to firms.

To protect exports, the bill would expand the President's retaliatory power against foreign restrictions. In addition to enhancing current authorization to retaliate against a country's unreasonable and illegal tariff and nontariff barriers to trade or a country's subsidization of exports which burden U.S. exports, the bill would give the President new authority to retaliate when a foreign country, by illegally or unreasonably restricting U.S. direct investment, impairs or nullifies a tariff concession that could permit increased U.S. exports. To encourage exports, the bill would liberalize existing provisions of law governing drawback procedures and authorize, but not require, the Secretary of the Treasury to refund indirect Federal, State, and local taxes on goods, services and property used in the manufacture of exports.

IT'S EXPORT WORKSHOP TIME AGAIN—*Clevelanders are shown reviewing plans for the city's sixth annual export workshop, to be offered on eight Tuesdays beginning this week. Cleveland State University is the site; the Cleveland Regional Export Expansion Council and Commerce Department Field Office are co-sponsors. Standing behind Field Office Director Charles B. Stebbins are, from left, Sven A. Langmack, Empire Plow Co.; Dr. Kenneth Haygood, dean of Cleveland State's Continuing Education Division, and Dr. Harry B. Osborn, Jr., TOCCO Division, Park-Ohio Industries. Osborn and Langmack are REEC leaders.*

Other Legislation: Of the 50 quota bills introduced since the beginning of the 92nd Congress, about 25 deal with textiles and shoes. Other products subject to such proposals include: meat and meat products; lamb; milk and dairy products; strawberries; iron ore and iron and steel mill products; manufactured products; electronic products; and bicycles. Also, a duty reduction bill has been introduced for certain sueded leather gloves and a reciprocal reduction of tariffs has been proposed on goods traded primarily between the U.S. and Canada. Temporary duty suspension or duty-free entry has been proposed for tungsten ore; upholsterers' articles; turtle meat, offal and substance thereof; raw silk and silk-fibered yarns; silk yarns; hollow reinforcing bars; and servicemen's personal effects. Bills to increase duties have been introduced for strawberries, mink furskins, olives packed in certain airtight containers, and stainless steel sheets and products thereof.

Other trade-related bills introduced would: establish import restrictions on products from countries nationalizing U.S.-owned property without compensation; allow States to provide for domestic preference ("Buy American") in acquiring materials for public use; protect the collectors of antique glassware against manufacture in the U.S. or importation of imitations; require special labeling of imported meat and industrial, office or household appliances; prohibit importation of metal and metal products during a strike; investigate foreign labor competition; require judicial review of Tariff Commission decisions; accord the Trust Territory of the Pacific the same customs treatment as insular possessions of the U.S.; establish standards of sanitation or quality to be met by domestic and imported fish products and bottled water; and eliminate in ten years the mandatory oil import control program of the U.S.

Committee Hearings: On Feb. 17 Secretary Stans testified before the Joint Economic Committee regarding the President's Economic Report, addressing himself to the outlook for U.S. foreign trade in 1971 (see page 16). The House Agriculture Committee on Feb. 22 opened hearings with regard to the Federal Environmental Pesticide Control Act of 1971 (H.R. 4152) and related bills. During the first two days of the hearings, officials from the Environmental Protection Agency and from the Agriculture and State Departments testified and answered questions regarding H.R. 4152 and H.R. 26, amending the Insecticide, Fungicide and Rodenticide Act to prohibit the importation of "certain agricultural commodities to which economic poisons have been applied."

TARIFF COMMISSION

During February, the Tariff Commission reported to the President the results of one firm investigation and 19 worker investigations, including 18 initiated on behalf of workers at footwear plants. In addition, the Commission opened new investigations and held hearings regarding adjustment assistance, dumping and unfair import competition. Also during February, the Commission issued two annual reports for products subject to escape clause action.

Adjustment Assistance: Of the 18 investigations on behalf of workers alleging unemployment and underemployment caused by increased imports of women's and misses' footwear, the Commission (Mize and Young not participating) reported nine unanimous negative findings and nine equally-divided determinations (Sutton and Leonard in the negative; Clubb and Moore in the affirmative). As a result of the negative determinations, workers at the following plants were held ineligible for adjustment assistance: Caswell Shoes, Inc., Lynn, Mass.; Dori Shoe Co., Lynn, Mass.; Wolsam Ltd., New York; L. E. Beaudin, Hanover, Pa.; Selwyn Shoe Mfg. Corp., Boonville, Mo.; Algy Shoes, Inc., Everett, Mass.; Adlib, Inc., Hialeah, Fla.; Stylecrest Footwear, Inc., Brooklyn; and Kickerinos, Inc., Newport, Ark.

Those cases for which the Commission was equally divided involve workers at the following plants: Jodi Shoe Co., Derry, N.H.; Maine Shoe Corp., Brunswick, Me.; Foot Flairs, Inc., Manchester, N.H.; Brown Shoe Co., Matoon, Ill.; Goldberg Bros., Inc., Haverhill, Mass.; National Ballet Makers, Inc., Medford, Mass.; Stage Door, Inc., Raymond, N.H.; Kramer Shoe Co., Haverhill, Mass.; and Evangeline Shoe Corp., Manchester, N.H. Under the law, the President may consider the findings of either group of Commissioners as the finding of the Commission. If the President agrees with the affirmative findings of Commissioners Clubb and Moore, he may rule some 2400 workers eligible to apply for adjustment assistance.

The remaining firm and worker cases decided by the Commission during February involved Fibre Form Corp. of Columbia City, Ind., a manufacturer of paper cones for loudspeakers, and its employees. In an unanimous decision, the Commission (Mize and Clubb not participating) found that neither the firm nor the workers met requirements of the Trade Expansion Act for adjustment assistance.

In addition, the Commission opened during February 12 new investigations to determine whether the petitioning firms and worker groups are eligible to apply for adjustment assistance. The firm cases concern the effects of imported cotton yarns and plain-woven fabrics wholly of cotton on Lone Star Textiles, Inc. of Halletsville, Tex., and the effects of imported ladies' shoes on Louis Shoe Co., Amesbury, Mass. Of the ten new cases opened on behalf of worker groups, seven involve footwear workers at three plants in Massachusetts, two plants in New York, and one each in Missouri and Pennsylvania. The remaining cases involve the effects of imports on workers at: Emerson Television and Radio Co. of Jersey City, N.J. (television receivers, radios and phonographs); RCA Corp., Memphis, Tenn. (television receivers); and Plant No. 33, McDonald Machine Shop, Chicago, Ill. (can-sealing machines).

Escape-Clause Reports: As required annually so long as articles are subject to escape-clause rates of duty, the Commission reported to the President during February on recent developments in the trade in pianos (except grands) and window glass. The Tariff Commission's report on pianos indicated a significant drop in imports for the first ten months of 1970, a decrease in the ratio of imports to consumption, and a decrease in U.S. producers' domestic sales. Regarding window glass, the Commission found that domestic sales and imports fell in 1970.

Last year, the President suspended for three years the Kennedy Round tariff reductions on pianos (except grands) at the second stage rate of 13.5 percent ad valorem; and proclaimed that the escape-clause rate then existing on window glass be continued until Jan. 31, 1972, when they would be reduced to the trade-agreement rates in three equal annual stages.

Dumping Cases: The Commission held consecutive hearings in February on two cases previously referred by the Treasury Department for determination on the question of injury to domestic industry. Both cases involve products from Japan: clear plate and clear float glass and clear sheet glass. Decisions are due in early April.

Also, the Commission initiated an investigation concerning brass key blanks from Canada. A hearing on the case, referred to the Commission earlier in the month by Treasury (see below), is scheduled for March 23 (rescheduled from March 16).

Section 337 (Unfair Import Competition) Cases: On Feb. 2, the Commission held a hearing as part of the full investigation of alleged unfair methods of competition and unfair acts in the importation and sale of sphygmomanometers (instruments for measuring blood pressure). Testimony was heard from the complainant, W. A. Baum Co., Inc. of Copiague, N.Y., and from the accused importer, Propper Mfg. Co. of Long Island City. N.Y. The case, involving alleged infringement of a design patent, was opened March 18, 1970.

OTHER AGENCIES

Treasury—*Dumping Cases:* A final negative determination was announced for frozen french fried potatoes from Canada, and a tentative ruling that cast or rolled glass from Japan is not being sold in the U.S. at prices below those in the exporters' home market was also announced.

Following summary investigations, Treasury has initiated two inquiries to verify information with respect to alleged dumping of asbestos-cement pipe from Japan and ice cream sandwich wafers from Canada. The value of imports for the period January 1970—August 1970 amounted to about $1.2 million.

Treasury—*Foreign Assets Control:* The Office of Foreign Assets Control has announced that quotas and licensing regulations for importation of animal hair, carpet wool, and cotton waste produced in the USSR and Outer Mongolia for 1971 have been established. Applications for import licenses must be filed before Sept. 1 and must be accompanied by a copy of a firm contract. Additional information is available from the Federal Reserve Bank of N.Y. or the Office of Foreign Assets Control, Treasury Dept., Washington, D.C.

Foreign Asset Control has also announced that certificates of origin issued by Israeli authorities are now available with respect to importation into the U.S. of paint brushes made with hog bristles.

Treasury—*Motor Vehicle Standards:* The Secretaries of Treasury and Transportation have proposed amendments to the joint regulations issued under the National Traffic and Motor Vehicle Safety Act of 1966 (Fed. Reg., Feb. 18).

The amendments are designed to facilitate entry of vehicles not subject to the Act and vehicles brought into conformity with the Act after their manufacture but prior to their importation. Comments on the proposal will be accepted by the Commissioner of Customs, Washington, D.C., until March 20.

Labor—*Adjustment Assistance Petitions:* Three worker groups were certified by the Labor Department as eligible to apply for adjustment assistance. Those receiving certification were workers at the following plants: C. P. Electronic, Inc., Columbia, Ind. (television components); Caressa Shoe, Inc., Miami, Fla. (women's shoes); and Wood and Brooks Co., Buffalo, N.Y. (piano components). Applications from the three groups, totaling approximately 850 workers, followed Tariff Commission determinations that the workers had lost their jobs due to increased imports.

Agriculture—*Imported Hams:* More than a million pounds of undercooked hams, imported from one Dutch firm, have been impounded by Agriculture. All future shipments from the company, including those enroute, will be rejected pending examination of the plant and the entire processing procedure by USDA officials. Imported canned hams must be sufficiently cooked to prevent possible entry of livestock diseases.

Agriculture—*Egg Products Inspection Act:* On Feb. 24, Agriculture held in New York the first in a series of meetings to discuss the Egg Products Inspection Act, passed in the 91st Congress. The meetings, which cover the general contents of the Act, information on those who will be affected, and plans for implementation of the Act, also are scheduled for Chicago, San Francisco and Los Angeles March 10, 15, and March 17, respectively. Imports will be required to meet the same standards as domestic products.

WORLD TRADE
NFERENC
E

HONORS TO CATERPILLAR TRACTOR—*Commerce's Ass't Secretary Robert McLellan (left) presents "E" Star Certificate to the Peoria heavy equipment firm's president William H. Franklin. Caterpillar's board chairman William Blackie won the Conference's "Man of the Year in Mid-America World Trade" award. Two other Illinois firms, Barco Division of Aeroquip, of Barrington, and Hodag Chemical, Skokie, won "E" awards and General Binding, Northbrook, won an "E" Star. John M. Kuhn of General Binding, the Conference chairman, is seated at center.*

McLellan Asks Realism Now In Trade Strategy

Any workable strategy adopted now by the American world trading community must recognize that the U.S. no longer dominates the global economic scene, and that a number of U.S. industries have severe problems because of growing competition from abroad.

Robert McLellan, Commerce Department's Assistant Secretary for Domestic and International Business, placed strong emphasis on these points at the 34th Mid-America World Trade Conference in Chicago last month.

McLellan was one of six Federal officials who put governmental priorities and responsibilities in world economic issues before the Midwest group. Another major discussion involved speakers on both sides of the free trade versus protectionism debate.

After hearing these speakers, the Conference adopted the following declaration:

"The 34th Mid-America World Trade Conference advocates a liberal, non-discriminatory, reciprocal and competitive world trade policy. This convention believes that free and equitable trade is essential for the preservation of economic freedom and the well-being of all people. We further believe that trade restrictions in any country of any type, be they local, national or international, tend to cause serious disruption to the world economy, and tend to constrict the flow and growth of international commerce."

In separate sessions organized by the Illinois State Bar Association, the traders discussed the legal and tax questions involved in foreign operations, including current anti-trust problems and patent law administration. One session touched on manufacturing in low wage countries and the investment incentives found there. Attention was called to Taiwan, Korea and Hong Kong, to the Mexican border industrial zone, and to Puerto Rico's industrial incentive program. The legal "conference with the conference" was a new departure for the Mid-America meeting.

Trade Fairs, Centers

Australian Buyers Will See American Quality-Control Equipment Display

Labor shortages, rising labor costs and a growing need for automation speedup are factors making Australia an increasingly important market for U.S. quality-control and reliability equipment. The latest U.S. products in this field will be shown to Australian buyers at a Commerce-sponsored quality-control equipment exhibition at the U.S. Trade Center in Sydney, June 21-25.

Both Australian imports and U.S. sales of quality-control equipment in Australia are growing. Fifty percent of the million-dollar-a-year demand for nondestructive testing equipment is filled by U.S. suppliers. Three years ago, the U.S. share of this market category was only 15 percent.

Market research undertaken for the Commerce Department shows that the major Australian buyer for nondestructive testing equipment is the government's Department of Supply, which makes purchases for ordnance, munitions and aircraft plants. The automotive industry is also a prime sales target.

Write the Department of Commerce, BIC-950, Washington, D.C. 20230 (202-967-3865), or contact any Commerce Field Office.

Latin, French Fairs Seek U.S. Exhibitors

U.S. exhibitors are being sought for three trade events planned in Latin America and France. Commerce is not planning a special U.S. promotion in these fairs.

Sao Paulo will host two international fairs simultaneously for agricultural technology and the food industry. Both will include exhibits of equipment, machinery, supplies and technology associated with their industries. For data on the July 9-18 events write: Alcantara Machado, Comercio e Empreendimentos Ltda., Rua Brasilio Machado, 60, Sao Paulo.

1
DOALL COMPANY
DoALL

IN BOOTH NUMBER ONE—*DoAll Co. teamed its numerical control system with a Swedish contour machine during a U.S.-Stockholm Trade Center equipment show.*

Products ranging from furniture and generators to computers and mobile homes may be displayed at the 47th International Fair of Marseille, Sept. 23-Oct. 4. In the 1970 event, 55 U.S. firms were among the 1,786 exhibitors representing 34 nations. Write: Emile Garden, 15 Moore St., New York, N.Y. 10004.

U.S. Promotions List

A listing of sales opportunities for U.S. firms in 15 U.S. commercial exhibitions, trade fairs, trade missions and solo displays and 19 shows at the eight U.S. Trade Centers is presented in this issue starting on page 55.

Oregon Firm Finds Scandinavian Buyers

Keeler-Hinds International Sales, Inc. entered the Scandinavian market through the Jan. 25-30 U.S. exhibition of production equipment for the metalworking industries. When the show ended, the Portland, Ore. firm's president, Jerold E. Keeler, exclaimed, "It would have taken us three years to accomplish what we did in 10 days here."

Projecting $1.9 million in 12-month sales, Keeler-Hinds was one of 18 companies estimating $100,000 or more in orders during the coming year. Total sales from the show reported by the 29 exhibitors are expected passing the $8.4 million mark.

Seventeen agents were appointed during the show, including four by Keeler-Hinds; negotiations are underway with another 21 candidates.

Almost 1,000 trade visitors attended the exhibition which featured products in such new fields as photo fabrication and glass shot abrasives.

Port, Producers Picked For 'E's

AIRTEMP'S CITATION—*Thomas E. Ferguson, Director of the Cincinnati Field Office, left, helps W. P. Balthrop of Airtemp Div. display an "E" citation.*

Seven firms in five states have been awarded Presidential "E" and "E" Stars for their efforts in exporting and promoting American products in foreign markets.

For increasing overseas sales of air conditioning equipment by approximately 22 percent annually, the Airtemp Division of the Chrysler Corp., Dayton, Ohio, was presented with an "E". To expand foreign sales, the firm enlarged its distributor network, developed technical literature for international markets and joined in several U.S. Trade Center shows. Airtemp now has offices and affiliates in more than 100 countries.

Ampco Metal Co. of Milwaukee, a manufacturer of specialized bronze alloys and ingots, castings, welding alloys, hand tools and other semi-finished metal products, won acknowledgment with an "E" Star. Philip Morris International, part of New York-based Philip Morris, Inc., was presented with an "E" Star in recognition of promotional efforts for leaf tobacco and tobacco products, razor blades and chewing gum. Since receiving its "E" in 1963, Philip Morris has more than doubled its cigarette exports.

For continuing efforts in promoting exports for the Rochester, N.Y. area, the Chamber of Commerce was presented with an "E" Star certificate. The Rochester Chamber of Commerce conducts seminars on international marketing, foreign licensing and other world trade matters.

Three other recent award winning concerns were the Port of Sacramento, at West Sacramento, Calif., which received an "E"; the annual Virginia Conference on World Trade in Richmond, also recognized with an "E"; and the Rockingham Poultry Marketing Cooperative, Inc., Broadway, Va., which packs and markets frozen and canned poultry, with an "E" Star.

E
STAR
AWARD

CALL FOR PHILIP MORRIS—*A. C. Rutzen, above right, Director of the New York Field Office, presented an "E" Star award to the president of Philip Morris International, Hugh Cullman, center. At left is Andrew C. Britton, senior vice president of Philip Morris U.S.A. Cullman then presented the managers of the Richmond, Va., and Louisville, Ky., facilities duplicate "E" Star flags.*

E
STAR
AWARD

TWO MORE "E" STARS—*With the Rochester Chamber of Commerce award, above, are William J. Maxion, standing, and W. D. Holder, both of the Chamber. On the right, Ampco's award is held by Fred H. Opitz, left, and Henry C. Fechtmeyer, right. Howard L. Phillips, of the Wisconsin REEC is in the center.*

E
STAR
AWARD

Worldwide Business Outlook

Faster Canadian Growth Will Raise Import Level

A rough average of informed forecasts suggests that the Canadian economy will be brighter this year and that import demand will hearten the many exporters who searched in vain for a growth factor in the Canadian market last year, reports Borrie I. Hyman, Commercial Attache at the U.S. Embassy in Ottawa.

Some problem areas, such as high unemployment, will probably present substantial social and economic burdens throughout the year and must be worked into the equation of popular confidence on which so much of national economic recovery will depend. Business and consumer buying—at home and abroad—will also be significantly influenced by such factors as the course of the floating Canadian dollar, the state of the American economy, legislation for major tax reform, and the way inflation continues to be resisted.

Our best market

Although 1970 was not a vintage year in terms of Canadian import growth, the American exporter, and especially firms new-to-market or new-to-export, should always be aware that even in the bad years Canada is our best export market and will be in the foreseeable future. Some of the most promising export prospects for this year are related to mineral resource development, an upswing in home building, revived demand for farm equipment, and consumer durable goods.

Consumer spending, government purchases, and residential construction in 1971 are expected to bring the Canadian economy out of near stagnation in 1970 to a growth in gross national product of 7 percent to 8 percent. Real growth may be on the order of 3.5 percent to 5 percent, with the Government taking the most optimistic view. There seems to be agreement that 1971 will be better than the last year. It is also generally accepted that real growth will not begin to pick up speed until the latter part of the year.

Consumers take over

Last year, exports and government expenditures were the chief bulwarks of the economy. Private capital expenditures actually declined in 1970 from the previous year. This year the consumer, who accounts for some 60 percent of GNP, will have to carry the economy with the help of government spending. Analysts of consumer intentions and moods foresee an 8 percent increase in his buying.

The consumer held on to his money rather tightly last year so that he now has an above-average level of savings, his disposable income—including farm income—is on an uptrend, much of his debt has been liquidated, and interest rates are sliding down. The only issue is whether his confidence will be sufficient to overcome coexistence with heavy unemployment. On balance, however, the consumer is a good candidate for installment credit buying and he probably will be back in the market place unless there is a deterioration in world economic conditions, or a fall off in the U.S. economy. Unemployment may lessen only slightly, if at all, during the course of this year but it should not worsen.

The guesses of economists and the spending intentions of business were so far off the final low mark in 1970 that forecasts for this year have a good deal of caution built into them. A much improved year for residential construction is not disputed, assuming the consumer maintains the confidence and the interest in home buying he has shown in recent polls. Although calculated from a low base in 1970, home building should be up an encouraging 15 percent this year, with about 210,000 starts, close to the national construction record in 1969.

The increase in private business investment, excluding housing, probably will be modest. Estimates range from 3 percent to 11 percent, with the Government once more taking the high side of the estimate, but with everyone agreed on a slow start, building to a higher rate of growth as the year ends. Those areas where private investment is expected to be highest are mining, oil and gas pipelines, and electric utilities.

Another substantial export surplus in the government balance of trade is foreseen but this year there will be a striking difference in the rate of growth of imports. In 1970 the sluggish economy and production stoppages in the North American automotive industry combined to keep imports just under C$14 billion, less than the total in 1969. Exports, on the other hand, boomed by some 13 percent to about C$16.9 billion. For this year, predictions are for a growth of 9 percent to 10 percent for imports, and 8 percent to 8.5 percent for exports.

Imports from the United States in 1970 declined 3.3 percent, more than those from the rest of the world. Nonetheless, they came to C$9.9 billion and accounted for an impressive 71 percent of all Canadian imports and roughly one-quarter of total U.S. exports. For this year, Canadian purchases from the United States should reach at least C$10.5 billion.

The freeing of the Canadian dollar last June 1 from its pegged value of US92.5 cents did not appear to have exerted any substantial influence on trade in the last half of the year but the move did cut sharply into profits of some major export industries, such as forest products, whose prices are quoted in U.S. dollars. In most cases, the demand for Canadian raw materials—the main base of the export boom—was sufficiently strong not to impair exports of even those products sold for Canadian dollars. As 1970 came to an end, the Canadian dollar floated close to parity with the U.S. dollar and is now calculated between US $0.99 and US$1.00. The resultant lower cost of imports did not seem enough in 1970 to overcome sluggish demand. This year, however, the 5 percent to 6 percent exchange advantage on imports plus improved demand should support the predictions of a sizable upswing in Canadian purchases from abroad.

How long the Canadian dollar will be allowed to float is a continuing and major issue in government, financial and trade circles. Re-pegging could take place this year but it is not likely so long as the Canadian dollar continues to hover close to parity with the U.S. dollar, a rate which most informed observers would consider unrealistic and not in Canada's interest in the long run.

Most American exporters may expect to gain from rising Canadian import demand but the best returns should go to those companies which can offer goods and services relating to the mining industry, producers of primary metals, farm equipment, oil and gas transmission systems, public utilities, and consumer durables. Passenger cars and parts moving under the Canadian-U.S. automotive agreement make up a major sector of the two countries' trade and prospects this year are encouraging for North American car sales despite the steady incursions from Japan. New housing will not only increase demand for basic building materials and builders' hardware but also will bolster the market for furniture and appliances. The largest department store organization in Canada is very optimistic about sales in these lines plus men's and women's apparel.

Capital goods loom large

Capital goods, though not expected to show a great percentage increase in growth, loom so large among Canadian imports that even the low side of the projections for private investment will mean significant sales opportunities. According to a recent government survey, the principal mining companies, including those in coal as well as metal ores, are planning Canada-wide expenditures of about C$626 million, up 25 percent over 1970. About three-fourths of this will go into new facilities and about half will be concentrated in iron ore and asbestos development in Quebec. The need for new jobs and currents of economic nationalism also suggest that pressure will increase for more processing of ores in Canada. Suppliers in this field may find it profitable to begin exploring now what could be a new market of high potential.

The transportation of oil and gas is now a well-established growth industry in Canada. Canadian mills are flooded with line pipe orders and transmission line expenditures this year will come to about a half billion dollars.

By this fall, three lean years for farm equipment sales should be replaced with a buying surge. Farm income is up, interest rates are dropping, replacements are needed, and new lines, such as forage equipment, will be required to cope with diversification to livestock on the Prairies. American manufacturers would be well advised to maintain a strong presence at farm equipment shows, such as the Red Deer Exhibition in Alberta this fall.

CANADIAN CONSUMERS WILL LIVE HERE—*In the prefabricated wooden housing units being manufactured in this Canadian plant, that is. A near record level of residential construction this year will bolster demand for a wide variety of goods. Picture on page 33 shows an apartment building under construction in Toronto, where authorities claim world's greatest per capita construction rate.*

Australia Looks For New Technology To Fuel Rapidly Growing Economy

Australia, the biggest U.S. market in the Far East after Japan, has shown continuing economic strength this past year and all indicators point to sustained expansion in GNP of 6-7 percent in real terms, presaging faster growth in U.S. exports to Australia. The trade figures for a recent three-month period (July-September) show substantial expansion, influenced heavily by imports of transport and defense equipment. Even allowing for these distortions, reports Paul H. Brent, Commercial Attache at the American Consulate General in Sydney, the growth for this quarter over the same period of 1969 is in the range of 10 percent at current prices.

Currently, Australian agriculture, primarily wool growing and wheat raising, is suffering from a decline in world prices with a backing up effect on sale of agricultural machinery and equipment. Farm income has dropped and the credit position of agriculture is serious enough that the Government is considering various plans to pump new credit into primary industry.

Country of over-employment

Barring agriculture, it is clear that the steady inflationary trend of the last two years will continue. Australia is still a country of over-employment with jobs going begging. This has resulted in increasing demands for higher wages. The national wage award of last December will exert a chain reaction on wage levels throughout industry and even agriculture. It is, therefore, quite predictable that price levels will be pushed up, but not equivalent in percentage to the wage increases. As a matter of fact, prices and productivity have generally risen at about half the wage level increases. This is causing concern in terms of the competitiveness of Australian manufactures in export markets. This in turn, however, offers an opportunity for U.S. equipment that has substantial cost saving factors. This was proven in U.S. Trade Center shows staged in late 1970.

MELBOURNE IS ON THE MOVE—*So is the rest of Australia, and it needs technologically advanced U.S. equipment to keep the economy going at a fast pace.*

The tendency of industry to invest in new equipment and machinery in order to keep pace with technological changes indicates an expanding market for capital equipment. Production in the manufacturing sector is increasing steadily and capital expenditures are rising rapidly. Private capital expenditures are increasing at a rate of about 15 percent above levels a year ago.

The biggest single development taking place in Australia is the strong expansion of minerals output. This growth will continue, offering excellent opportunities for U.S. mining machinery, geophysical equipment, materials handling systems, aircraft and built-in equipment for aerial surveys, and a wide range of machinery used in ore extraction, assaying and processing. The only negative factor is the decline in offshore oil drilling activity.

Recent Trade Center shows in the fields of data communications and graphics equipment, automated business machines and biochemical equipment have confirmed market research findings of strong demand for new technological equipment used in business and also in laboratories. The biochemical equipment show, held last September, drew visitors from all over Australia—professional types—who came to see the equipment demonstrated by 25 exhibitors at the U.S. Trade Center in Sydney. This reflects a continuing demand for any equipment that is associated with the medical field. Australia's population growth of 2.2 percent annually poses a load on medical facilities which cannot be matched adequately by new medical facilities.

In terms of areas for growth

which could be explored by American exporters, good opportunities exist in electrical equipment and communications, instrumentation for industry, modern packaging and materials handling equipment, material working equipment geared to medium range production capacities, modern business equipment, and air conditioning and refrigeration for commercial purposes, including equipment for freezing purposes applied to marine products and foodstuffs generally.

Immediate potential

One of the areas of immediate potential for American industry is equipment for natural gas installations. Natural gas has been discovered in a number of states, but significantly in the Bass Strait area and in South Australia. Melbourne has already converted its domestic household services to natural gas and the same is happening in Brisbane and Adelaide. Shortly, the Sydney metropolitan area will also go over to natural gas for both industrial and residential use presenting a significant opportunity for American suppliers of natural gas equipment.

Printing and bookbinding is a high cost industry in Australia, beginning with the high cost of paper because of protective duties on materials for printing. New Zealand provides adequate softwood for pulp manufacture and there appear to be good opportunities for companies to manufacture paper in Australia from New Zealand pulp logs and pulp. This is particularly true in the field of high quality printing papers, which presents a serious cost disadvantage for the domestic printing industry.

At the same time, high-speed automatic printing presses and equipment are needed in order to produce a lower-priced end product. It is for this reason that the U.S. Trade Center in Sydney will stage an exhibition, opening Mar. 22, in the field of graphic arts equipment. The show is already sold out beyond planning expectations, which would seem to confirm market research findings of potentials for U.S. manufacturers of printing and bookbinding equipment.

One of the by-products of increasing instrumentation in Australia is increased pollution of air and water. For years this was not considered a worrisome problem, but during the past year a great deal of public interest has been focused on the need for curbing further pollution of the atmosphere and metropolitan waters. A number of governmental groups have been established to study the pollution problem. The experience in the United States with this problem is transferable to Australia. Pollution control methods and equipment are fields for which the Consulate General and the U.S. Trade Center are doing some exploratory work, looking to the possibility of an exhibition or symposium of experts in this field.

While many Australian import duties are high, by-law entry at concessional rates are available for products that are not made in Australia or in the United Kingdom. This system is used particularly by importers of highly specialized technical equipment needed by Australian industry. By-law actions are temporary in duration, requiring re-application. A good deal of attention is being devoted to review of the entire tariff structure in Australia, mainly because of the effect of the import tariff on costs and production and ultimate prices in the domestic market.

Considering the market growth in Australia and rapid technological advances, the market as a whole offers unlimited opportunities for U.S. manufacturers. There is a real receptivity for new ideas and particularly new technology from the United States. The market needs more active cultivation by American business representatives.

Swedish Economy Settling Down To More Moderate Growth Rate

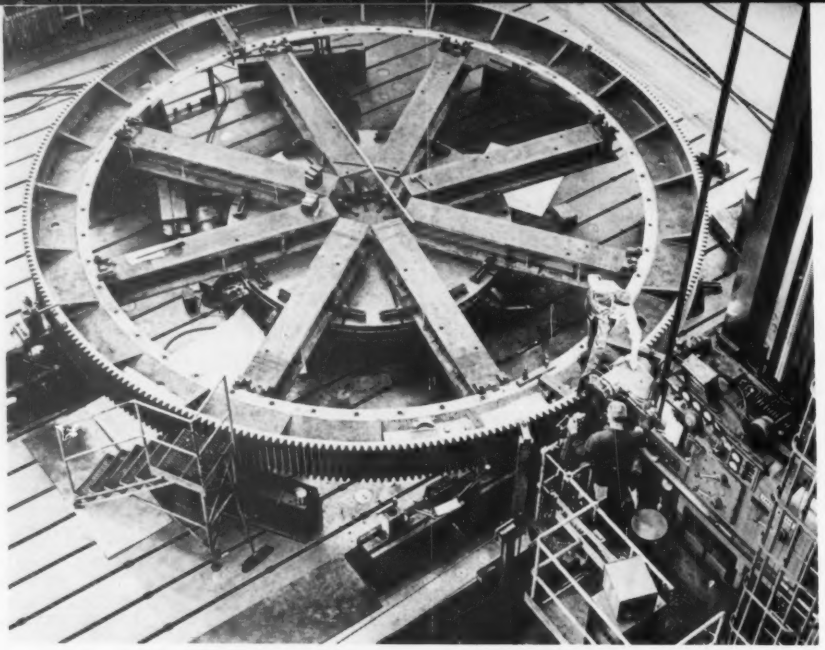
The rate of growth of the Swedish economy is now tapering off to a more moderate level. This slowdown is expected to continue at least during the first half of 1971 and perhaps throughout the calendar year. Towards the end of this year, however, or, at the latest, in the first half of 1972, the economy is expected to resume a more substantial rate of growth.

The U.S. Embassy in Stockholm has reported to the Department of Commerce that the rate of increase of real GNP is now officially estimated as follows: 1968/69—5.7 percent; 1969/70—4.3 percent; and 1970/71—2.8 percent.

The current policy mix, which is expected to bring about a return to domestic stability and concomitant improvement in the foreign balance, consists of a further tightening of fiscal policy and a simultaneous easing of monetary policy, along with encouragement of industrial development.

Thus, the key questions for the Swedish economy in 1971 seem to be: (1) will the wage settlement be moderate enough to keep Sweden competitive in world markets?; (2) will the Government succeed in its policy of transferring more resources from private consumption to industrial investment?; and (3) will the balance of payments improve? The answer to the third question is, of course, largely dependent on an affirmative answer to the first two.

The fact that growth of domestic demand, excluding inventory investment, slackened from 4.5 percent in 1969 to 2.8 percent in 1970 illustrates the restrictive nature of



BIG SALE TO SWEDEN—*This huge gear went from Allis-Chalmers' West Allis, Wisconsin plant to an iron ore pelletizing plant near Kiruna, north of the Arctic Circle.*

recent Swedish economic policy. This trend, plus a decline in gross investment, removed some of the pressures on prices, but because of normal lags, prices continued to climb at a relatively high rate throughout 1970.

In August 1970, a limited price freeze was announced on certain foods, mainly grains, meat and dairy products. In October, a general price freeze was imposed on all commodities and services, with certain very limited exceptions. On Feb. 11, the price freeze was lifted for many producer goods, including iron and steel, machinery, instruments and chemicals. The freeze is still in effect for a majority of goods, however, including all consumer articles.

In spite of the price freeze, the level of consumer prices continues to rise (e.g., from September to December 1970, the increase was at an annual rate of 6.7 percent), partly as a result of the Nov. 1 rise in taxes on alcoholic beverages. Further rises were, of course, necessitated by the increase of the value added tax from 11.1 percent to 17.6 percent, effective Jan. 1. Even the Government, which has consistently underestimated price rises in its economic forecasts, predicts an increase of 7.7 percent in consumer prices in 1971, compared with 7.0 percent in 1970. Out of this 7.7 percent, however, 3.2 percent is attributed to the increase in value added tax. Demand-pull inflation should be less this year than last.

Labor costs will rise

Labor costs will rise in 1971—how much may not be clear until summer. For most of the unionized labor force, nationwide wage negotiations are underway. If past experience is any guide, the new agreements will not be signed before June. Where settlements are reached without open conflict, increases will be retroactive to Jan. 1.

Even when the agreements have been signed, the precise extent of labor cost increases will not be known.

Even as the economic boom slows down, a continued tight labor market will cause substantial wage drift this year as well.

Sweden's wages, already Europe's highest, will climb higher. When the air clears, labor cost increases averaging as much as 12 percent for blue-collar labor and 8 percent for white-collar workers can be expected, with a substantial portion of the increases going to the low-wage group of workers.

The rate of growth of industrial production, which is estimated at 7.5 percent from 1969 to 1970, is expected to approximate 4.5 percent from 1970 to 1971. While some of the expected softening can be attributed to the slowdown in domestic demand (which results from the overall stabilization policy), some of it is the result of capacity limitations and reduced external demand in certain sectors.

The latest estimates of changes in domestic fixed investment, if they turn out to be correct, indicate developments which should be favorable for the long-run health of the Swedish economy and for trade with the United States as well. After virtually uninterrupted increases during the past two decades, investment in permanent housing is reported to have declined by 5 percent (in constant prices) from 1969 to 1970. Likewise, after even larger increases over an equally long period, state and local authority fixed investments (other than government enterprises) are reported to have stagnated at a level of 0.5 percent annual increase. The resources released by these changes permitted a rise in fixed investment in the manufacturing sector of 7.5 percent, when total fixed investment in all sectors was rising at an annual rate of only 1.0 percent.

Government policy is to continue to restrict investment in housing and government activities, while encouraging private industrial investment. Even if they are implemented only in part, these policies should lead to improvements in the overall balance of the economy and should, incidentally, improve the import market for capital goods, of which the United States is a major supplier.

Investment in inventories was the largest single cause of the 1970 rise in domestic demand. In fact, the increase in inventories between the first half of 1969 and the first half of 1970 is estimated as the equivalent of a 4 to 5 percent growth in gross national product. This rapid stockbuilding was a major factor in the rise in imports during 1970, which amounted to more than 9 percent by volume, while exports rose about 8.5 percent. Thus, in spite of a slight improvement in the terms of trade, the trade deficit increased by almost $100 million to a level of about $250 million. During the second half of the year, however, the rate of growth of imports began to decline.

The Government predicts another increase in 1971 at 8.5 percent in the volume of exports, while imports are expected to rise by only 4 percent. If these predictions prove correct, the trade deficit would be replaced by a surplus of some $75 million.

The improvement in the balance of trade, if it occurs, however, will still be counteracted by a continued increase in tourism abroad, increased remittance of funds by foreign workers in Sweden and increased aid to developing countries. Thus, the total balance of current payments is expected to be in deficit in 1971 by at least $150 million, even if the optimistic trade predictions come true.

Viewed both from Sweden's long-range economic policies and short-run prospects, the outlook for trade with the United States is good. A high-wage country with an ambitious social welfare program, Sweden faces a constant need to raise productivity rapidly through renewal and modernization of its industrial plant. With both imports and exports amounting to one-fifth of the GNP, it is constrained to follow liberal foreign trade policies, at least with respect to industrial products, and its current economic policy should be distinctly beneficial to U.S. sales.

American firms may find that willingness to enter into joint ventures with Swedish firms—in some cases with the Swedish Government a partner as well—will facilitate their entry into Sweden. In 1970, Dow Chemical announced its first manufacturing activity in Scandinavia, a latex plant, possibly to be followed by other chemical processes. Great Lakes Carbon Steel's graphite plant, built on a 50-50 basis with a Swedish firm, also went into production.

Talks have resumed

Beginning in late 1970, Sweden resumed discussions with the European Communities over the terms of Swedish affiliation. While Sweden is prepared to enter into a customs and agricultural union and to take other measures to integrate its economy with the Common Market, it has reiterated that the arrangement must be consistent with its policy of neutrality. Whether a formula can be found to accommodate Sweden's special requirements will become clearer during 1971. If Sweden did come within the EC customs and agricultural union, the effect would be somewhat higher tariff and trade restrictions against U.S. products and would place U.S. exporters at a disadvantage in relation to potential suppliers within the Community.

In recent years, the Swedish Government has become more actively involved in the business and financial sectors, resulting in uncertainty as to whether the hitherto liberal climate for private business was coming under threat.

While the Government is proceeding with projects already announced, it has not recently proposed new measures. This has been attributed to (a) the need to restrain government spending; (b) a desire to reassure private business over the long-term outlook in choosing between new commitments in Sweden and Swedish subsidiaries abroad; and (c) less incentive for innovation, following the 1970 election which resulted in the Social Democratic government losing its parliamentary majority.

Turkey's Major Development Needs Continue To Stimulate Import Rate

Turkey's trade in 1971 should be brisk with exports stimulated by the devaluation and imports rising in response to growing development requirements and Turkey's enhanced ability to pay for what it needs. Last year's imports from the United States, according to Turkish figures, were believed to have reached a seven-year high of over $200 million, while further growth in the U.S. market share is expected in 1971 as a result of both continued aid support and an expansion of non-aid imports.

Norman W. Getsinger, Commercial Attache at the U.S. Embassy in Ankara, goes on to say that 1970 was a year of political and economic uncertainty. But the government's political difficulties did not prevent effective action in the initiation of a mid-year economic reform which included devaluation and related monetary and fiscal measures. The result was an immediate alleviation of the balance of payments problem.

Pause in activity

These uncertainties were only partially responsible for slowing the pace of development in 1970, however. Agriculture, the most important sector, showed no growth mainly because of weather-related crop failure. Industrial growth slackened largely because of a pre-devaluation shortage of raw material. But stabilization did enforce a pause in business activity as buyer and seller sought to assess its effect.

The economic outlook for 1971 is mixed. The respite in balance of payments difficulties should con-

TURKISH TRADE TO RISE—*The import level may hit $1 billion in 1971. Above is a view of a pier in Istanbul.*

tinue. Agricultural results are unpredictable but should be improved by the devaluation. Business and industry face a cost-price squeeze as the Government pursues stabilization to protect the gains of the devaluation. The balance of payments should continue to improve with devaluation having a strong positive effect on trade, tourism and remittances while foreign assistance remains at a high level.

The uncertain outlook for 1971 does not, however, alter the excellent long range prospects for Turkey's economic development. In addition to abundant resources, and a large and industrious population, Turkey should continue to enjoy, over the long run, the advantages of a stable government, wise economic planning, and considerable foreign assistance.

According to the annual program, Turkey in 1971 will import goods valued at over $1 billion for the first time in its history. Actual imports may not quite reach this figure, but Turkey's economy has reached the point at which annual imports can be expected to pass the billion dollar mark.

Unfortunately, despite the improved balance of payments situation, the 1971 program has not moved Turkey very much farther toward real import liberalization. Though reduced, substantial predeposits and import stamp duties still remain. There are still long lists of goods subject to rigid quotas, and many imports are forbidden.

In 1970, U.S. exports to Turkey were around $200 million, the highest level of imports from the United States since 1963. U.S. aid in substantial amounts continues to support the U.S. role as Turkey's principal supplier. It is estimated that the final figure for 1970 will include some $40-45 million of import assistance (Program Aid), about $50 million drawdowns of previously committed project aid, and $33-38 million in PL-480 surplus wheat. The 1971 aid program has yet to be determined, but there will be a carryover of a substantial portion of the $65 million in program aid made available but only partially used in 1970.

Trade is growing

U.S. commercial (non-aid) trade with Turkey has been growing rapidly. Back in 1963, when Turkey's imports from the United States reached the relatively high figure of $210 million, the imports were almost all U.S. aid. With about the same total of imports from the United States in 1970, non-aid imports are expected to reach some $75 million. Prospects for at least this level of private trade in 1971 are very good indeed.

Among others, good markets exist for U.S. sales of organic chemicals, paper, electrical machinery, vehicles and parts, fertilizer, aircraft, measuring and control instruments, medical instruments and books. These are the products for which the United States has been improving its market position despite intense competition from Europe. The fertilizer market outlook is clouded by weakness in the Turkish fertilizer distribution system. Aircraft will be an especially large item with the Turkish Airlines buying two more DC 9's and adding two leased 707's in 1971.

Progress on Turkey's development of tourism and food processing is expected to open new market opportunities for U.S. suppliers. In Istanbul the Sheraton and Intercontinental hotels are under construction. Stretching from Canakkale to Iskenderun are hundreds of miles of touristically undeveloped Mediterranean coastline rich in historic ruins.

For the inevitable tourism development, hotel and motel equipment will be needed in large quantities. Import quotas specifically for tourism goods provide for direct ordering by entrepreneurs, and tourism investment can be made with the sizable accumulations of blocked funds in the hands of existing foreign enterprises. U.S. suppliers of tourism products are virtually unrepresented in Turkey, but selection of proper agents would require on-the-spot investigation.

Similarly, the increasing production of fruit and vegetables in the Marmara and Mediterranean growing areas, plus expanding European markets for fresh produce, offer opportunities for U.S. suppliers of food processing and produce handling equipment. The possibility of World Bank loans for tourism and food processing broaden the prospect of available foreign exchange to cover imports in those categories.

Markets are developing

Good markets are also expected to continue to develop over time for U.S. mining and forestry equipment, automobile repair machinery and specialized plastic and textile machinery. U.S. engineering firms continue to market their services in Turkey despite their relatively high price. Badger is at work on the Russian refinery in Izmir, and U.S. drilling contractors are busy with oil prospecting, while Bechtel/FMC have concluded their extensive development survey of the rich Cukurova area on the southeast coast. The latter, in keeping with the pathfinding role of engineering studies, will hopefully lead to an inflow of U.S. products and investment in the agribusiness field.

Turkey is not a natural market for the United States in the sense that it is, say, for Germany. Credit for the growth of U.S. private trade is due in part to the marketing skill of U.S. suppliers, and to the salesmanship of their Turkish representatives. But a very large share of the credit must go to a 22-year $2.7 billion U.S. assistance program which has conditioned Turkey to the widespread use of U.S. products and services in its development effort. Many Turkish businessmen, engineers, contractors and government officials have learned that it is cheaper to pay for the quality built into U.S. products.

Nevertheless, during recent years, the gradual reduction of U.S. assistance plus the continuing necessity for Turkey to buy on softer-than-commercial credit, had cast a shadow over the future of U.S. sales. The proximity, nearly approximate quality, and lower cost of Western European product seemed bound to back U.S. products off the Turkish market except for those supplied through affiliates in Europe.

Fortunately, a reprieve has been obtained as a result of the very active intervention of the U.S. Export-Import Bank; by the end of 1970 Eximbank had expressed to Turkish buyers a readiness to consider participation in support of U.S. sales, valued at many millions of dollars, of earth moving equipment, heavy trucks, gas turbines, steam generating units, steel mill equipment, and mining equipment.

The U.S. investment scorecard for 1970 was not very impressive, with additional U.S. investment of a little over $10 million realized. Existing American investors were experiencing more than usual difficulty with the Turkish authorities. Evidence of political instability was available in the forms of bricks and molotov cocktails tossed by zealous students at the offices of foreign firms in Ankara and Istanbul with Pan American and the American Turk Bank as the favorite targets.

Investment problems

Existing U.S. investment in Turkey is most heavily concentrated in automotive assembly, pharmaceuticals and tire manufacture. On the whole the U.S. companies have shown good profitability, but the original investments, made a number of years ago, have not expanded with the market. One problem is the Turkish Government effort to narrow remittances and obtain increased exports from these industries which were established on a basis of import substitution and oriented towards the domestic market. A more immediate problem is the Government's stabilization program which imposes price and credit controls while providing no controls on rising costs.

The year 1971 finds a number of U.S. firms prepared to implement expansion plans providing government actions indicate a desire to mitigate business problems and there is evidence of greater political stability. The success of the stabilization program, theoretically at least, should increase the confidence of potential investors in Turkish economic management. But many observers, including resident U.S. businessmen, feel that a substantial increase in U.S. and other foreign investment awaits a more fundamental change in both official and unofficial Turkish attitudes toward foreign private participation in the development process.

Five U.S. Foreign Service Reports Offer Economic, Business Outlooks

Morocco has been able to finance an increasing amount of its investment budget from current surpluses. The 1971 budget has projected rather modest increases in expenditures. The operating budget is only about 1.7 percent above the revised budget for 1970 and the investment budget, after allowing for certain adjustments, comes to about the same level as the revised budget for 1970. The average level for government capital expenditure will be increased from an average of $200 million per year for 1968-69, the first two years of the current Five-Year Plan, to an average of $250 million for the last three years of the Plan. The investment goals of the Plan appear to have been substantially met during the first three years. It seems likely that the overall goals of the Plan will be more nearly achieved than in either the 1960-64 Plan or the 1965-67 Plan.

The Netherlands Antilles, at the insistence of the European Common Market countries, has granted reverse tariff preferences on a number of products to members of the community as a quid pro quo for its own associate membership in the organization. Due to the cabinet crisis, the law still has not been passed and there, conceivably, could be changes in it. However, any alterations that might be made would undoubtedly be minor and it is believed a schedule substantially like the provisional one will be approved eventually and made retroactive to Nov. 1.

The largest preference given in the Netherlands Antilles' new schedule is 5 percent, e.g. overalls are subject to a 25 percent duty if from the Common Market and a

30 percent duty if from other countries. Other representative duties are: automobiles (10 percent & 14 percent); cosmetics (2½ percent & 4½ percent and phonograph records (6 percent & 10 percent. The new preferences have not given an insurmountable advantage to the exporter from the Common Market, but will make him more competitive in some fields. The real threat to U.S. exporters will come from the Japanese, who have moved in strongly in automobiles and appliances, products in which they can offer a considerable price advantage.

Niger has made little overall net economic progress in the last few years, but the uranium exploitation at Arlit has caused a boom in the desert. About two dozen French engineers and technicians, some with their families, are living at Arlit, and more than 500 Nigeriens work there. The mine, an open-pit operation, has provided jobs and given a boost to the economy of the desert area of Niger.

The mine will provide some increased income to the Government of Niger, which has a 16 percent participation in SOMAIR, the company holding mining rights. However, even when the processing of ore reaches its planned output of 1,500 tons of concentrate in 1974, government revenues will probably not exceed $4 million per year, or about 10 percent of the current budget. By 1978, it is hoped that the second uranium find at nearby Akakan, which will require subterranean mining, will begin being exploited.

Surinam's present serious financial difficulties have made its search for investment even more urgent. Surinam has a favorable history of faithfulness to its commitments and, what is more, offers highly advantageous tax benefits and unrestricted remittance of profits. Light industry producing for export is the principal target of the present Government, but other investment is also welcome.

Investors interested in Surinam should be prepared to provide all or substantially all of the capital needed to establish their enterprises as there is little or no investment capital available from local banks. The Government, however, usually finances infrastructural improvements to plant sites and it appears that it is now interested in equity investment with Netherlands development funds if a project promises significant economic gains for Surinam.

URANIUM BRINGS BOOM TO NIGER DESERT—*President Diori Hamani (second from left) and other officials find out that the uranium in the desert is no mirage.*

Ecuador's Government in 1970 managed to weather a bad fiscal crisis, but the storm has not completely subsided and Ecuador faces a crucial year in 1971. However, steps taken in 1970, particularly the implementation of new taxes which have significantly increased revenues and the devaluation of the sucre which has helped to stem imports and stimulate exports, constitute a sound policy foundation on which the Government may be able to contain its chronic fiscal and balance of payments problems. To do this will require fiscal restraint on the part of the Government, a restraint that may prove very difficult to achieve in the face of growing financial and developmental demands on the public sector.

An important positive factor for Ecuador is the continued foreign investment in the oil potential of the Ecuadorean Oriente, an investment which through 1970 totaled approximately $100 million and is expected to double in 1971. Though production is not scheduled to begin until mid-1972, continued development of Ecuadorean oil will provide added confidence and will be a significant stabilizing factor in an otherwise unsettled economic and financial situation. When oil output commences the resulting revenues accruing to Ecuador should significantly increase effective demand for imports, including demand for consumer goods. More intensive sales efforts by U.S. exporters now will pay off in succeeding years.

Eximbank Supporting Major American Project 'Exports'

This is the first in a series of periodic reports on developments in the international investment and finance fields, and actions affecting international business operations, as noted by the Bureau of International Commerce's Office of International Investment. The inaugural article treats a significant activity by a Commerce sister agency.

American-built projects, some of them giant industrial complexes, are rising in many out-of-the-way places. A tire and rubber factory in Kenya, a natural gas liquefying plant in Brunei, a nuclear power installation in Taiwan, an agricultural equipment factory in the Ivory Coast—projects like these are being built by U.S. firms around the world. A large number of them necessarily are financed by the Export-Import Bank of the United States, with the Bank supplying funds in cooperation with a commercial bank.

Sometimes a project will involve a package, or "turnkey" deal—the delivery of a completed product, ready for operation. It may even include a management contract, calling for the U.S. supplier to staff the installation with the necessary technical experts. On the other hand, only expansion and modernization of an existing plant may be required.

Incentive role

While Eximbank is not permitted to compete with private lending sources, and only supplements what they are willing to do, it becomes involved in practically all large project exports because the financing almost invariably calls for longer repayment terms than commercial banks are willing to handle. Eximbank offers incentives to get private banks to participate in the loans and frequently will help a seller make such an arrangement.

For example, it will guarantee a commercial bank's part of a loan and, where necessary, will also agree to take the latter payments, so that the commercial bank gets its money back first. This gets around private banks' reluctance to accept long-term commitments. Of total Eximbank authorizations of almost $4 billion in fiscal 1970, projects accounted for $638 million, with the total value of the projects far greater than that in dollar terms.

Preliminary planning

Eximbank's responsibilities often go beyond merely financing a project. It must first make sure of the economic and technical feasibility of any project which it is to support. The expert divisions in Eximbank—Financial Analysis, Engineering, and Planning and Research—share the responsibility for seeking out flaws in a project before any financing is approved. The Bank's Board of Directors makes the final decision in every case.

In case of doubts about a project, Eximbank might require, as a condition to its support, that a feasibility study be made by some independent firm, or that a project be handed over on a turnkey basis to some contractor the Bank considers acceptable. The Bank's principle job—an assignment from President Nixon—is to relieve the U.S. balance of payments problem through export expansion. Consequently, Eximbank tries to obtain as many deals as possible for American exporters, as long as there is reasonable assurance of repayment on each one.

Among all the projects supported by Eximbank the most detailed—and the most fascinating—are those involving nuclear power plants and their fuel. A special program has been designed for financing these transactions, in order to help maintain U.S. supremacy in the field. Under it, thirteen nuclear plants have had Eximbank financing in the period of the past eight years.

A typical example is the 308 MW Tsuruga plant constructed by the Japan Atomic Power Company under a turnkey contract with the General Electric Company. Total cost, including the first core nuclear fuel (which lasts five years), was about $100 million, of which $45 million was for U.S. components. The contract with G.E. covered all equipment, design and construction services and initial fueling. The plant was completed in March 1970, exactly on schedule and within the cost estimate.

Despite the U.S. lead, the exporter in this field faces greatly increased competition from foreign suppliers who are marketing their own or U.S.-licensed designs. The Germans, British and Canadians have developed reactor systems which compete with the U.S. light water, enriched uranium systems in terms of cost per kilowatt hour of electricity. Many of these firms have access to special financing assistance from their governments, which enables them to offer highly favorable credit terms. This is often a crucial factor in a buyer's decision.

Pattern of participation

While transactions may vary with country, capital market and competitive conditions, the pattern of Eximbank participation in financing nuclear power plants and fuel is fairly standard, as follows:

► A cash payment of 10 percent is required during construction of the plant.

► Eximbank provides a direct loan in combination with a loan or loans extended by other U.S. or non-U.S. lending institutions.

► The loan to finance reactors, related equipment and services ordinarily is repayable over a 15-year period after a grace period to allow for construction of the plant.

► Financing of the costly initial fuel and subsequent replacement supplies is for five years after insertion of fuel in the plant.

When Eximbank was reorganized in 1969, to allow it to take a more active role in export financing assistance, more than a score of new and revised programs were brought into play. Two of these were designed especially to aid project exports.

Under one of these, Eximbank will aid in the financing of engineering, planning and feasibility studies of large capital projects abroad in cases where there is a likelihood that the ultimate project will provide further markets for U.S. goods, services and technology. These study contracts have the advantage of placing U.S. engineers and other specialists at the scene early, so that they are in a position to obtain the follow-on work.

The other program is the Bank's local cost financing facility. Local costs are those incurred by the buyer of U.S. goods and services for labor, equipment installation, locally available materials and other expenses at the scene of the project. Normally, Eximbank will guarantee local cost financing up to 15 percent of the value of the goods or services exported from the U.S. for the basic project.

State Banking Associations To Get Export Briefings

The Department of Commerce and the Export-Import Bank recently began the second round in a series of joint briefings of delegation from state bankers associations. This year 33 associations have been invited to schedule sessions to learn how they can increase their export financing business, with six already accepting. In 1970, 17 delegations representing 200 banks participated.

Legislation to increase the Export-Import Bank's authority to lend, guarantee, and insure is to be the subject of hearings by the Senate Committee on Banking, Housing, and Urban Affairs scheduled for March 8, 9, and 11. The proposed bills (S.581 and S.19) also provide for exemption of the Bank from the Federal budget; extension of its statutory life; and in the case of S.19, alteration of its basic legislation to allow it to finance some East-West transactions.

Meanwhile the Bank has announced plans to borrow up to $500 million in short-term funds from overseas branches of U.S. banks. This is similar to the $1 billion offering Eximbank made in January of this year—which was oversubscribed by more than 100 percent. The Bank is utilizing offshore funds to help finance its overseas lending, thus maximizing its contribution to the U.S. balance of payments position. The new financing has been undertaken in light of the current availability of a large volume of Eurodollar funds.

The Asian Development Bank (ADB) has announced a 150 percent rise in its loan approvals for 1970 over 1969 figures. The Bank's loan approvals last year totalled $245 million. The year's activity brought cumulative loan approvals to $384 million in 56 conventional and soft loans.

The ADB has also released a major study of economic conditions in eight of its Asian member countries, "Southeast Asia's Economy in the 1970's." The study has an overall report and six sectoral reports, covering such topics as the "green revolution," manufacturing industry, and the impact of private foreign investment in the countries covered.

The Inter-American Development Bank (IDB) has reported adoption of resolutions by member countries to increase its resources by a total of $3.5 billion. However, the increase will not take effect until all countries, with the required voting power, including the U.S., have given final approval. In the U.S., approval is by Congressional authorization.

The increase consists of a $2 billion addition to the Bank's ordinary capital and $1.5 billion for the Fund for Special Operations (FSO). In 1970 Congress authorized the whole of the U.S. subscription to the ordinary capital ($823.5 million of which $150 million is to be paid-in and the remainder callable) and $100 million of the $1 billion U.S. contribution to the FSO. This year the U.S. Government will request approval of the rest of its proposed FSO funding.

The additional funds could enable the Bank to raise its annual lending rate to $900 million over the next few years—substantially higher than the record volume of $644 million in 1970.

Investment briefs

Many nations are reappraising the role of foreign investment in their economies, and significant major policy adjustments are resulting. Robert McClintock, U.S. Ambassador to Venezuela, suggested recently to a Venezuelan business group, joint venture agreements as a means of meeting domestic objection to foreign investments while continuing to reap the benefits to the local economy from additional inflows of investment funds. Joint ventures can provide "arrangements that will preserve foreign equities and Venezuelan just rights in the development of natural resources and an ever expanding economy," he maintained.

Venezuela has amended its income tax law as regards the extractive industries. The changes provide that a uniform rate of 60 percent will apply to oil and iron ore companies instead of the former sliding scale of 20 to 52 percent, beginning with the Venezuelan fiscal years ending after December 30, 1970. In addition, the new amendments give the Venezuelan government the right to set unilaterally the so-called Tax Reference Values, prices from which taxes are calculated.

Libya: in accordance with its desire to lessen foreign influence on the Libyan economy, the revolutionary government has nationalized foreign-owned bank shares. Terms of the decree provide for compensation for the nationalized shares and for creation of two banks from the eight which had existed before. The state will have at least 51 percent ownership of both institutions. An insurance decree issued simultaneously provides for 60 percent government ownership of all local insurance companies, the remaining 40 percent share to be reserved to Libyan stockholders. Foreign and domestic shareholders are to receive the net asset value of their shares.

Tunisia: the Government of Tunisia is continuing its major drive to return the country's economy to a primarily private enterprise base and is attempting to attract foreign investors. To help them avoid frustrations from slow-moving administration of the Investment Code, the Tunisian Government is streamlining the procedures concerned with initial study of investment proposals and their subsequent consideration for approval or denial by government bodies.

Int'l Executives Unit To Hold Foreign Trade Exams In May

The American Society of International Executives will conduct its 15th semiannual career foreign trade examinations on May 15 in various cities throughout the country. The examinations, which aim to give professional standing to international business personnel, are offered in nine categories.

Applications are to be submitted by Apr. 15. For information, write: ASIE, 734 Land Title Bldg., Broad and Chestnut St., Philadelphia, Pa. 19100; or phone, 215-563-8887.

World Trade Actions

Canada Drops Some Vehicle Duties; Austria Eases Labeling Regulations

Canada: Import duties have been removed on off-highway vehicles, parts and accessories and on parts for such accessories imported by manufacturers of off-highway vehicles. Under the provisions of Canadian Order-In-Council P.C. 1971-140 of Jan. 26, the duty exemption is applicable retroactively to Aug. 1, 1970 on vehicles and to May 1, 1970 on parts and accessories.

The general 12 percent sales tax will also be remitted on off-highway vehicles but only for the difference between the tax calculated on the duty-paid value and that calculated on the value for duty of the vehicle.

"Off-highway vehicle" means a self-propelled truck designed primarily for off-highway use at quarries, mines, gravel or sand pits, or construction sites or in logging operations and classified under tariff item 41006-1, which carries a 10 percent duty, under tariff item 41105-1 for which a 12½ percent rate is applicable, and tariff item 43803-1 where the duty is 15 percent.

To qualify for duty and tax exemptions, Canadian manufacturers of off-highway vehicles must maintain a ratio of the sales value of production to the value of sales in Canada of not lower than 75:100. They must also provide that the Canadian value added to production is not less than 40 percent of the cost of sales of all off-highway vehicles that the manufacturer sold for consumption in Canada in the twelve-month period ending July 31 in any year for which importation is made and duty and sales tax remission is claimed.

Austria: Authorities have modified labeling requirements for the specified groups of food preserves listed below. The ordinance, effective Jan. 1, was published in *Bundesgesetzblatt* No. 104 of Dec. 30, 1970. It provides for the cancellation of those labeling requirements which had necessitated the furnishing of information as to methods employed (such as pasteurization, sterilization, deep freezing and dehydrating) in the manufacture of packed goods, as well as the furnishing of directions in German for storing the item concerned.

Products affected are: Preserves from meat and other food preserves with meat added; preserves from fish and crustaceans, or other food preserves with fish or crustaceans added; fruit preserves, excluding citrus fruits, grapes, and preserves falling within customs tariff number 08.05; nuts other than coconuts, cashews, and Brazil nuts; and vegetable preserves, excluding dry pulses.

However, the food labeling requirements remain in effect for those commodity groups unaffected by the recent ordinance. A loan copy of a report summarizing the food labeling ordinance in English is available from: Western Europe Division, Office of International Commercial Relations, BIC-888, U.S. Department of Commerce, Washington, D.C. 20230.

Costa Rica: The Government recently joined the growing number in Central America which have issued laws restricting the ability of foreign principals to terminate agency agreements. Decree 4684 requires heavy payment of compensation from foreign companies in the event they dismiss their Costa Rican agents or representatives without just cause, as defined within the law.

Copies of the law, in Spanish

with unofficial English translation, can be obtained on loan from the American Republics Division, BIC-886, U.S. Department of Commerce, Washington, D.C. 20230.

El Salvador: A new law was issued to increase the exportation of non-traditional industrial, handicraft, and agricultural products outside of the Central American Common Market (CACM).

Benefits, which will last for a ten-year period, include exemptions from import duties on capital goods, raw materials, components, containers, lubricants and the like, as well as exemptions from certain internal taxes such as income, inheritance and property transfer.

Decree 148 went into effect at the beginning of 1971. Copies of the law and an informal translation can be obtained on loan from the American Republics Division.

France: In order to help check further increases in consumer prices, the Government has reduced the value added tax rate on various food products. The tax rate on coffee, tea, and chicory has been reduced from 17.6 percent to 7.5 percent. A similar reduction has been effected for various products containing grain, sweets and ice cream.

Germany: An import quota for canned asparagus cuts and tips was announced in the *Bundesanzeiger* No. 229 of Dec. 9. Applications for licenses must be made within 21 days after loading aboard ship in the country of origin. All applications for licenses should be accompanied by the foreign seller's bill in duplicate. Should the authorities announce that the quota is filled, licenses will only be issued for such shipments for which the purchase contracts were signed on or before the day of the announcement and which were loaded aboard ship no later than 14 days after publication of the announcement. Licenses issued will be valid until June 30.

Greece: Duty-free importation of certain animal feedstuffs has been extended until June 30. It was authorized by Joint Decision Vol. No. 289103/3258 of Jan. 5, of the Ministers of Agriculture and Commerce.

Guyana: The External Trade Bureau (ETB), which was established by the Government of Guyana last July to control imports from Communist countries, recently expanded its controls to cover a large number of commonly used drug and food items imported from all countries. The announced purpose of these new controls is to reduce and stabilize retail prices of essential consumer goods.

For these goods (virtually all pharmaceuticals, patent medicines, drugs, vitamins, health tonics, personal hygiene items, and about half of the more common varieties of imported foods) importers may place orders only with the ETB, effective Jan. 1. Additional information is available from the American Republics Division.

Honduras: A new law regulating the activities of representatives and distributors of commercial firms has been issued. Although applicable to both national and foreign firms doing business in Honduras, the practical effect will be to reduce somewhat the flexibility of the latter. The law restricts the ability of a principal to terminate an agency agreement, and obligates distributors of certain equipment to maintain expanded stocks of spares and accessories. Ambiguities in the law may hinder interpretation and enforcement.

Copies of the law and its regulations, in Spanish with unofficial translation, can be obtained on loan from the American Republics Division.

India: Drug prices are being more strictly controlled under a recent Government notification. Drug manufacturers now need prior approval of the government in order to set prices of new products or increase existing prices. The government can also revise the price of any drug formulation.

Criteria for establishing and revising drug prices include the cost of raw materials, promotional expenses, volume of sales, product mix, nature of specialized formulation, export performance, expenditure on research, profitability, and prices approved for comparable formulations of other producers.

Prices of imported drugs will be set on the basis of landed cost, handling and clearing charges, storage expenses, distribution costs, and a reasonable profit.

LAFTA: The 10th annual negotiating session of the Latin American Free Trade Association, concluded on Dec. 4, added only 24 new items to the national schedules of concessions and further reductions on five items previously negotiated. At parallel negotiations, however, five new complementation agreements were reached and a previously-signed complementation agreement was amplified.

The session voted to continue without change the requirement that at least 50 percent of the value of a product must be of LAFTA origin in order to qualify for concession treatment.

Uruguay: Importation of merchandise transported by national flag ships and ships incorporated in the national register will be exempted from the 5 percent increase on surcharges established last Oct. 20. Merchandise covered by freight agreements between national and foreign shipping companies, but carried on ships of companies not participating in such an agreement will have a 5 percent surcharge levied in addition to the 5 percent October increase, except for those with a zero percent surcharge. This decree will be in force until June 29.

Uruguay also has decided to allow importers, during the first six months of 1971, to receive up to 35 percent of the amount of their total 1970 imports before being required to pay the penalty-oriented prior deposit. This sum is generally held for six months before the importer is reimbursed. About 40 percent of 1970 imports were covered by the deposit system.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine. The section that follows, incorporating the familiar Licensing and Investment Opportunities and Foreign Trade Opportunities, presents details about U.S.-sponsored overseas exhibits, licensing and joint venture proposals, opportunities to sell to foreign firms and government agencies, appoint agents, major construction and expansion projects, and U.S. visits by foreign buyers.

U.S. Promotions Overseas

GREECE. Tourism Industry Trade Mission. Ten U.S. companies will be represented in a mission of the latest American products in these fields: catering and vending equipment; ice making and refrigeration equipment; hotel laundry and dry cleaning equipment; commercial food preparation and serving equipment; recreational equipment; also hotel planning and construction-development firms. Entry deadline is Mar. 15. Call Larry C. Cozart, 202-967-4715. Trade Mission. Apr. 18-May 1.

YUGOSLAVIA. Business Development Office & Catalog Exhibit of Food Processing, Air Conditioning, Refrigeration, Medical, Process Control and Measuring Equipment. Commerce is again featuring a Business Development Office in the annual Zagreb Spring Fair. The Office will be manned by both Commerce and State Department officials who will display catalogs, promote the represented U.S. products and register prospective buyers for proper follow-up activities. The catalog exhibit will feature American product literature in the following equipment categories: air conditioning and refrigeration, food processing, medical, and process measuring and control. To participate call Albert Caya, 202-967-2120 before Mar. 19. Zagreb International Spring Fair. Apr. 19-25.

UNITED KINGDOM. High Performance Materials. A symposium/exhibition of materials and design applications will feature U.S. materials producers, fabricators, designers, end users, engineers and management. Sophisticated and technologically advanced products of all kinds continue to have excellent sales opportunities in the U.K. In 1967, Britain paid $77.7 million for American expertise. Exhibits will feature advanced composite materials, plastics, metals, superalloys and related fabrication equipment. Call Bill Ducker, 202-967-3848. London Trade Center. Apr. 26-30.

CANADA. Recreational Vehicles & Components. Vehicles included in this promotion are tent trailers, travel trailers, truck campers, motor homes and mobile homes. From May 9-16, the mission will visit Calgary, including the "Mobile Canada Show", and from May 16-21, it will be in Edmonton. Call G. Edward Borst, 202-967-4228. Trade Mission. May 9-21.

JAPAN. Automation Controls & Related Devices for Production. The U.S. exhibition in the 4th Automatic Control Equipment Show in Japan is planned to capitalize on the rapidly expanding market for sophisticated automation equipment and controls. The rapid expansion of Japan's economy has resulted in increasing labor shortages and rising wages. Even large enterprises employing over 1,000 workers are affected; one-third of which report labor shortages are affecting production. Market research identifies the following product categories: process control computers, control instruments and valves, numerical controls, direct numerical controls and retrofit, industrial robots, servosystems and controls, fluidic systems and components. Call Robert Levine, 202-967-4705. U.S. Commercial Exhibition, 4th Automatic Control Equipment Show. Tokyo. May 14-18.

UNITED KINGDOM. Nuclear Instrumentation & Equipment. The sophisticated and advanced market for nuclear instrumentation and equipment for industrial, scientific and medical use in Britain is growing at a rate of approximately 20 percent a year. Market research estimates an annual $15 million market in the categories of radiation measuring and controlling instruments, radiation protective devices, auxiliary equipment and materials, special equipment for reactor construction and operation, nuclear-medical equipment, equipment for commercial application of radioisotopes, irradiation technology and analytical devices. Call Fred Tower, 202-967-5767. London Trade Center. May 17-21.

JAPAN. Materials for the Electronics Industry. The Japanese electronics industry is one of the world's most active, growing at an annual rate of 22-25 percent. In the area of sophisticated materials for the electronics industry, U.S. products account for 20-30 percent of total imports, or some $72-$100 million and the U.S. share is expected to increase steadily. In 1969 consumption reached a level of $361 million. Total Japanese electronics production came to $6.5 billion in 1969, and should reach $9.5 billion in 1970. Call C. H. Watts, 202-967-4512. Tokyo Trade Center. May 17-22.

UNITED KINGDOM. Electronic Components & Test Instruments. Sales of electronic components are increasing by 12 percent a year, three times the average manufacturing industry growth. Deliveries of components rose to $578 million in 1968, and estimates project a continuing upward trend. Good sales opportunities are projected for U.S. firms in the 22nd staging of this London exhibition. Call Eugene Shaw, 202-967-3838. U.S. Commercial Exhibition, International London Electronic Components Show. May 18-21.

ARGENTINA, BRAZIL, EDP Equipment Trade Mission. Market research indicates that Argentina and Brazil offer American manufacturers and suppliers of EDP equipment strong sales prospects. In Argentina, where all EDP equipment is imported, the market rose from less than $4 million in 1966 to $8.2 million in 1969; a 15 percent rise per year is expected through 1975. The market for this equipment in Brazil rose to over $14 million in 1969 and should expand at an annual rate of 20 percent during the next five years. Call Richard Eisenmann, 202-967-2215. A Mar. 15 deadline for applications has been announced. Trade Mission. May 22-June 4.

FRANCE. Aerospace Equipment. Air transportation in Europe, both passenger and freight, is expanding rapidly. Ground support facilities are becoming strained to overcapacity. Many airports, modern a few years ago, are becoming obsolete. New supersonic jets and high capacity aircraft will aggravate the situation. The growth in air traffic is expected to create a strong demand for aircraft, components and support equipment. Call Charles M. Whitley, 202-967-4961. U.S. Commercial Exhibition, Paris Air Show. Paris. May 27-June 6.

FRANCE. Industry Oriented Computers. The use of computers and related data processing equipment by manufacturing and processing industries in France is growing rapidly. French industry, aware of the need to automate, modernize and expand, is becoming one of the major users of computers in France. The industrial sector accounted for 40 percent of French computer installations in 1969. Sales of EDP equipment in France are expected to total $418 million in 1970. U.S. sales of EDP equipment to France totaled $29.9 million in 1969 and are projected to reach $80 million by 1974. Call John Gleason, 202-967-2434. Paris Trade Center. June 7-11.

SCANDINAVIA. Packaging Machinery, Materials & Containers. The Scandinavian countries are experiencing a sharp rise in demand for convenience packaging. In 1969 imports of packaging machinery, materials and containers totaled $45.5 million for the four countries. Practically every sector of industrial packaging is expanding, including the food, drug, detergent and wine and spirits industries. Call C. E. Walls, 202-967-4256. Stockholm Trade Center. June 7-12.

JAPAN. Chromatographic & Spectroscopic Equipment. A $40 million market in Japan for chromatographic and spectroscopic equipment is expanding 20-25 percent annually. Although Japanese manufacturers supply a large portion of domestic demands for these products, advanced U.S.-made equipment continues to grow in this highly developed and sophisticated market. Sales of U.S. equipment were estimated at $4.8 million during last year. Call Randall E. Miller, 202-967-3363. Tokyo Trade Center. June 7-12.

ITALY. Advanced Medical Equipment. Italy plans to spend $480 million during 1971-1975 to expand its regional hospital system by 40,000 beds. An estimated $41 million will be spent on equipment, including intensive care equipment for over 2,000 beds. Call 202-967-3968. Milan Trade Center. June 8-12.

SWITZERLAND. Environmental Pollution Control Equipment. Europe is more densely populated than the United States, and its industry has had a free hand for generations in polluting the environment. Although laws have been on the books for many years to require control of these pollution activities, it has been only recently that public consciousness is forcing governments to think seriously about enforcement. France is pursuing control plans that will subsidize municipal water plants up to 70 percent of investment costs and industrial plants up to 50 percent. Belgium plans to spend $20 million in 1972 to protect underground and surface water. Call John Wolf, 202-967-3822, U.S. Commercial Exhibition, PROAQUA PROVITA. Basel. June 8-12.

POLAND. Machine Tools & Measuring Control Equipment. Six U.S. firms may exhibit their products at a Commerce-organized display in Poland's largest industrial fair. This year will mark the first time that the U.S. has mounted a commercial industrial equipment exhibit in Poland. Poland continues a policy of a relatively high rate of capital investments, especially in high-technology industries. The most recent Five-year Plan, 1971-75, is intended both to modernize the economy's output and to make it less labor intensive but more efficient. Much of the advanced technology and equipment needed to achieve these goals is not available in Eastern Europe, and Poland is therefore planning to spend $250-$300 million annually for the next five years to purchase imports from the West. American machinery and instrumentation has an excellent reputation among Polish businessmen because of advanced design, reliability and quality construction. Contact Don Schmadel, 202-967-4601. 40th Poznan International Fair. Poznan. June 13-22.

AUSTRALIA. Quality Control & Reliability Equipment. As Australian industry expands, increased emphasis is placed on automation and quality control. Because local production is limited and unable to supply the wide range of products needed by the growing industrial complex, imports of sophisticated control, measuring and testing equipment will increase considerably in the next decade. In the last three years U.S. manufacturers have increased their share of the non-destructive testing market from 35 percent to 50 percent. This exhibition and combination technical conference-seminar will feature the latest U.S. dimensional, non-destructive and optical test and measurement equipment. Call Max Miles, 202-967-3865. Sydney Trade Center. June 21-25.

UNITED KINGDOM. Separation Systems Equipment for Industry. Concern over pollution has added an important impetus to the U.K.'s growing need for more advanced separation systems to handle in-factory processes. Indicative of the need, imports of filter and centrifuge equipment was 33 percent higher in 1968 than in 1965. The U.S. had 36 percent of this $15 million 1968 import market. There is an increasing need among filter users for "packaged" filtration with instrumentation that provides a complete system for use with an industrial process. Call Gus Duda, 202-967-4462. London Trade Center. June 21-25.

GERMANY. Metallurgical Equipment & Instrumentation. Estimates place a $52 million value on the German market for metallurgical equipment and instrumentation. Germany industry's increasing emphasis on in-plant automation for production and testing has precipitated a great deal of demand for the latest, most modern process control and measuring equipment. In addition, powder metallurgy is new in Germany and is causing much interest. The German market for metallurgical equipment and instrumentation is reported excellent for U.S. firms. Contact William Gaines, 202-967-4073. Frankfurt Trade Center. June 21-25.

UNITED KINGDOM. Printing & Bookbinding Machinery. The London International Printing Machinery Exhibition, IPEX, is one of the largest in the world for the printing industry. The last London IPEX in 1963 drew over 250,000 visitors. U.K. imports of this equipment have been rising steadily, with U.S. exports holding over 20 percent of the import market. Call Joe McNulty, 202-967-4653. U.S. Commercial Exhibition, London International Printing Machinery Exhibition. July 13-24.

JAPAN. Computer Input/Output Devices. Japan is a lucrative market for U.S. computers, related equipment and software. New market research indicates good sales prospects for cathode ray tubes (CRTs), magnetic ink character and mark readers (MICRs and MIMRs), optical character readers (OCRs), plotters, magnetic tape and disc-type cartridges. Although Japan still maintains an import licensing system and duties ranging from 10.5 percent to 25 percent on computers and related equipment, U.S. sales continue to rise. The first nine months of 1970 show U.S. exports to Japan at nearly $110 million. Two shows are scheduled in July. Call Maurice Shea, 202-967-4511. New Merchandise Mart, Osaka, July 21-24, and Tokyo Trade Center, July 29-31.

AUSTRALIA. Exploration Geophysical Equipment. The opportunities for sales of U.S.-made exploration geophysical equipment continue to expand as the Australian mining industry experiences dynamic growth. At present, virtually all Australian demand for geophysical equipment used in exploration work is met by imports. U.S. manufactured geophysical equipment predominates as evidenced by the 70-80 percent share of the import market American producers currently hold. Sales potential for most all types of equipment used in exploration work appear good for the next several years. Call Max Miles, 202-967-3865. Sydney Trade Center. Aug. 30-Sept. 3.

GERMANY. Plastic & Plastics Machinery. German per capita consumption of plastics—over 100 pounds annually—is the world's highest. Future growth in the use of plastics is predicted on the as-

Sales opportunities in 15 U.S. commercial exhibitions, trade fairs, solo exhibitions and trade missions and 19 shows at the eight U.S. Trade Centers are being offered to present and potential U.S. exporters between now and Dec. 6, 1971.

Each Trade Center exhibition is limited to one particular line of products and centers are located in London, Bangkok, Milan, Frankfurt, Stockholm, Sydney, Tokyo and Paris. For further information on the Trade Center shows described or for more facts on U.S. exhibitions, **write:** *Commercial Exhibits Program, BIC-932, U.S. Department of Commerce, Washington, D.C. 20230.*

Trade missions are groups of U.S. businessmen organized to travel abroad promoting the export of U.S. goods and services made by their particular industry. **Write:** *Trade Missions Div., BIC-926, U.S. Department of Commerce, Washington, D.C. 20230.*

A product showroom where U.S. goods or literature can be displayed is also maintained at the American Embassy in Ethiopia. **Write:** *Edward W. M. Bryant, Commercial Attache, American Embassy, Crown Prince Asfaw Wossen St. Abbis Ababa.*

sumption that applications will expand rapidly into many new fields, especially, in building-construction and automobile production. Expanded use of plastics is also anticipated for interior decorating and home furnishings. Furniture is also a major user of plastics. Call George A. Kemp, 202-967-3088. U.S. Commercial Exhibition, 6th International Plastics Fair (KUNSTSOFFE '71). Duesseldorf. Sept. 16-23.

SCANDINAVIA. Educational & Industrial Training Equipment. Scandinavian countries are intensifying their use of modern, advanced educational and industrial training aids and equipment applicable to public and private educational institutions, universities, adult education programs, company and labor union manpower training programs, business and management colleges, government agencies, libraries and television and film enterprises. Officials of educational institutions, industry and governmental organizations have indicated the time is ripe for an exhibition featuring the latest U.S. technology in this field including programmed and computer assisted instruction, electronic responders, closed circuit ITV, video tape recording systems, microfilm reading and storage systems, language laboratories, teaching machines, projection equipment and software. Call John R. Crown, 202-967-4421. Stockholm Trade Center. Sept. 20-25.

FRANCE. Industrial & Commercial Security Equipment. The French businessman is becoming increasingly aware of his need for effective protection against losses incurred by fire and theft. Many French industrial plants, banks and commercial establishments have inadequate safeguards, or none at all. An important, expanding marketing opportunity exists for American manufacturers of alarm systems, fire detection and extinguishing equipment, parking lot security equipment, personnel identification systems, security cameras, electronic locking systems, pilferage prevention devices, check protection systems, document destruction equipment, and ancillary products. This event is being scheduled concurrently and promoted in cooperation with EUROPROTECTION, a major European exhibition of industrial security and safety equipment held biennially in Paris. Call Bruce Strong, 202-967-2835. Paris Trade Center. Sept. 27-Oct. 1.

JAPAN. Electronics Production Equipment, Components & Test, Measuring Instruments. Japan's production of all electronics products is expected to top $9 billion during 1970, of which the production of industrial electronic products is estimated at $2.5 billion, a 25 percent increase over 1969. Imports from the U.S. of electronics products in 1969 were valued at $274.8 million, a 40 percent rise over 1968. Call William Dawson, 202-967-5682. U.S. Commercial Exhibition, Japan Electronics Show. Osaka. Oct. 1-7.

GERMANY. Industrial Assembly Equipment. The field of assembly fastenings and techniques in Germany is still in the early stages of development. There are numerous ways to cut costs that have not yet been exploited. German manufacturers continue to look to the U.S. for new techniques in the field of special fasteners. American licensing agreements as well as agency representation are readily accepted. An estimate of the demand in Germany for industrial assembly equipment is between 10-15 percent of the demand in the United States. Contact Don Schmadel, 202-967-4601. Frankfurt Trade Center. Oct. 11-15.

GERMANY. Industrial Automation & Instrumentation Equipment. Europe's demands for measuring and control equipment are valued at approximately $4.5 billion. Growing consumer and industrial demands have increasingly strained European production capabilities and this demand plus new technological specifications have combined to produce a new high demand for automatic process control equipment. Germany, the largest single country market in Europe, is estimated to have a market for measuring and control equipment valued at $1 billion. This market is growing at the rate of 15-20 percent annually. Call John F. Whitley, 202-967-2425. U.S. Commercial Exhibition, INTERKAMA '71. Duesseldorf. Oct. 14-20.

KOREA. Industrial Machinery. Korea is continuing to forge solid economic gains; its growth rate is growing at 10% annually. Imports are also reaching new levels, with the U.S. supplying more than $630 million in 1970. Korea is seeking to correct a large trade imbalance by modernizing its export industries, through the use of new machinery and equipment, much of which must be imported. This will offer American equipment manufacturers another opportunity to supply extensive Korean demands. Call Robert Levine, 202-967-4705. U.S. Solo Exhibition, Second U.S. Industrial Machinery Exhibition. Seoul. Oct. 18-23.

JAPAN. Avionics & Ground Support Equipment. The aircraft industry in Japan is experiencing a dynamic revival. Imports of aircraft engines, navigation and ground electronics navigation aids, and aircraft and ground support equipment are very strong, supplying more than half of Japan's demand. The technological level of Japanese-produced engines and certain instrumentation is still below that of U.S. and some foreign producers and therefore, import demand is expected to remain high. Contact Henry Watts, 202-967-4512. Tokyo Trade Center. Oct. 25-30.

SCANDINAVIA. Design Engineering Components for Machinery & Vehicle Equipment Manufacturers. U.S. exports of controls, components and parts to Scandinavian OEMs (original equipment manufacturers) totaled over $70 million in 1969. Scandinavian OEMs of machinery and vehicles rely heavily on outside suppliers for controls and components, and they import over half of their requirements for this equipment. Sweden imported over $472 million of industrial controls and parts, hydraulic and pneumatic units and components, pumps, valves and filters, gears, clutches, couplings, bearings, transmissions and their parts, packings, motors and parts, engines and parts for engines, and other electrical, electromechanical, and mechanical parts for various types of OEM equipment. Design engineers want to obtain the latest in technologically advanced controls and components so they can remain competitive in World markets. This exhibition will be directed to all design engineers, technical directors, managerial and purchasing personnel in all factories which design and build industrial machinery and equipment or vehicles of any type. Because a large number of the visitors to the exhibition will be design engineers, computer-aided design, drafting and other related equipment also may be shown. Call Stanley Hays, 202-967-5751. Stockholm Trade Center. Oct. 25-30.

GERMANY. Equipment for Vacuum & Cryogenic Research. American sales of vacuum and cryogenic equipment in Germany's market are largest for the more advanced and sophisticated lines. American industry has been a leader in the application of advanced high and ultrahigh vacuum technology in research and in specialized cryogenic lines. Special sales efforts are required to maintain or increase the U.S. share of this market. For information contact Don C. Schmadel, 202-967-4601. Frankfurt Trade Center. Dec. 6-10.

JAPAN. Air & Water Pollution Control. Japan is suffering with the problems of pollution. Her great factory cities, Tokyo, Osaka-Kobe, Nagoya and Fukuoka, like their counterparts in the U.S. and Europe, are daily showered with tons of pollutants. Rivers are choked with industrial wastes. The Japanese Government, responding to a concerned public, has acted to put into force laws which will clean up Japan's air and water. Antipollution equipment produced in Japan is not being made in great enough quantity or variety to meet all demands. U.S. firms are invited to enter into a ready and large market for up-to-date antipollution control equipment where demands are predicted reaching $540 million by 1975. Call Robert Tysar, 202-967-4918. Tokyo Trade Center. Dec. 6-11.

Space Fully Booked

The following exhibitions and trade missions, in which all exhibit space has been reserved, are still open for visits by interested industry representatives. U.S. firms with sales representatives in the exhibitions' or missions' market areas and exhibitors may wish to ask local businessmen to visit them.

Tourism Industry Trade Mission, Dominican Republic & Venezuela, Mar. 14-27; Analog & Digital Measuring, Recording Instruments, Frankfurt Trade Center, Mar. 15-19; Agricultural Development Trade Mission, East Africa, Mar. 16-Apr. 3; Service Industries Trade Mission, Belgium & Netherlands, Mar. 20-Apr. 2; Dairy & Poultry Equipment, Milan Trade Center, Apr. 14-25; Pulp, Paper & Converting Equipment, Scandinavian Trade Center, Apr. 19-24.

Chemical Processing Equipment & Industrial Process Controls, U.S. Commercial Exhibition, Salon International De La Chimie, Paris, Apr. 19-25; Air Conditioning & Refrigeration Trade Mission, South America, Apr. 19-30; Production Equipment for the Electronics Industry, Frankfurt Trade Center, May 10-14; Agribusiness Equipment, U.S. Solo Exhibition, Caracas, May 17-23.

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) manual.

Background information on opportunities abroad and also assistance on overseas investments are available from the Office of International Investment, U.S. Department of Commerce, BIC-878, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

For additional information on opportunities to manufacture foreign firm's products in the U.S., described under "Licensing In U.S.", write Commerce's Office of International Investment, BIC-874, or call 202-967-2248 referring to the File Number assigned each opportunity.

WTD indicates that a World Trade Directory Report containing financial and background information on the foreign firm is available for $2 from the Department of Commerce, BIC-924, Washington, D.C. 20230, or from any Commerce Field Office.

Licensing, Investment Abroad

2033—GREECE — Greek **tomato paste** firm seeks to expand under joint venture with U.S. company. Wants investor to provide machinery, equipment and managerial know-how in exchange for equity, including a majority position. Project expansion estimated about $620,000. Firm presently operates plants on Thera Island, Cyclades and on Kos Island, Dodecanese producing annually 500 metric tons of tomato paste. Nikolaos Prekas Tomato Paste Industry. "STELLA", 2 Lemissou St., Athens. WTD. P-71082

2542—GERMANY—Licenses to expand production of **metal office and store fixtures, shelving and partitions.** Firm's major customers are supermarkets located in Germany and EFTA countries. Ladenbau Pistor, 5071 Biesfeld, West Germany. WTD. P-71081

2815—TURKEY — Firm seeks licensing arrangement with U.S. companies for production of **pigment dispersions for textile printing and viscose dyeing.** Annual production plans are for approximately 800,000 kilograms of pigment dispersions. Organik Kimya Sanaii ve Ticaret A.S., Muhurdarzade Han 206/207, Bahcekapi, Istanbul. P-71077

2821—MARTINIQUE—License to manufacture **polyurethane foam** for use in pillows, mattresses, similar products. Also interested in purchase of machinery and raw materials. Firm currently produces paints, markets in nearby areas. S.I.A.P. O.C. (Societe Industrielle Antillaise de Peinture Chimiques) 120, rue Joseph Lagrosilliere, Trinite, Martinique, F.W.I. WTD. P-71079

2834—GERMANY—License to manufacture **pharmaceutical and medical preparations** for human use. Firm's present line includes liniments, liquids and pills for gastro-intestinal diseases; heart and circulatory diseases; rheumatism, rheumatoid arthritis, lumbago, etc. Dr. Med. Robert Mueller, Mgr., ADENYLCHEMIE, Chemisch-Pharmazeutische Fabrik, D-7016 Gerlingen bei Stuttgart, Hermann-Dreher-Strasse 6. WTD. 6-71078

2840—ICELAND — Medium-sized manufacturer seeks license to expand present line of **laundry and sanitary preparations** and make new products. Particularly interested in new products such as **household chemical specialties, basic specialty detergents for cosmetics and products from fish oils.** FRIGG, P.O. Box 58, Lyngas 1, Gardahreppi. WTD. P-71071

3522—FRANCE—French forge and foundry firm, which produces iron castings, molded steel and steel castings and replacement parts, seeks joint venture with U.S. producers primarily in the field of **agricultural machinery.** Albert Ninou, Man. Dir., Forges & Acieries du Sud Ouest, 110 rue Achard, 33 Bordeaux. WTD. P-71070

3542—NETHERLANDS—License to produce and distribute **hydraulic presses and equipment** in Europe. Firm currently makes overhead cranes, electric hoists, hydraulic presses and steering engines. R. A. Muylaert, N. V. Machinefabriek Stork-Jaffa, Groeneweg 2, Utrecht. WTD. P-71074

3679, 3841—SWITZERLAND — Manufacturer and distributor of medical instruments and electronics seeks license to manufacture **medical and surgical instruments and electronic components and accessories.** European marketing operation established in 1969. Annual sales about $4.5 million. Jeffery A. Frampton, Pres., Teckmar SA, 94 rue des Eaux-Vives, 1207 Geneva. WTD. P-71075

Developing Tourism Trade Gets High Rating In Burundi

Burundi, an East African nation, is giving high priority to development of tourism. Acting upon a recent study completed by the Belgian consulting firm Group Structures, the Burundi are particularly interested in constructing an international hotel in the capital city of Bujumbura and in developing the necessary infrastructure throughout the country.

The Government of Burundi presently plans a 204-room hotel costing an estimated $4.1 million with 16 deluxe suites, swimming pool, conference rooms, golf course, etc., and is seeking financing and managerial advice. Write: Office of International Investment, BIC-878, Dept. of Commerce, Washington, D.C. 20230.

Three German Areas Promote Investments

The regions of Weser-Jade, Landkreis Oldenburg and East-Friesland-Papenburg, situated along Germany's North Sea coast, are inviting inquiries concerning investments. These areas offer industrial land, external and internal transportation, reasonably priced power and labor, public financial assistance and favorable living conditions.

Inquiries should be directed to the following trade organizations: For Weser-Jade: Wirtschaftsforderungsgesellschaft mbH Weser-Jade, 28 Bremen 1/West Germany, Am Wall 187, P. O. Box 1861. Landkreis: Wirtschaftsforderungsgesellschaft fur den Landkreis Oldenburg mbH, 29 Oldenburg, Gerichtsstrasse 7 (Kreisamt). East Friesland-Papenburg: Chamber of Commerce and Industry for East Friesland and Papenburg, 297 Emden, P. O. Box 329.

Swiss Firm Seeks U.S. Joint Venture Partner

A Swiss firm seeks a medium-size U.S. rubber or rubber fabricating company as joint venture partner for the American manufacture of Euroflex elastic plates. These plates, made from waste rubber with concrete underplate, are used as ground covering for pavements, playgrounds, around swimming pools and in buildings.

The rubbery, elastic synthetic surface provides firm footing and helps prevent injuries from accidental falls. Initial investment is estimated at $100,000 to $200,000. The U.S. partner in this venture should have a sales and distribution network. **File 2005**

Licensing In U.S.

1511—FRANCE — Patented method of **building edifices on sloping sites** or on mountain sides. Holder of patent designs apartment buildings, villas, industrial plants, hotels, shops and ski resorts. **File 2000**

2033—GERMANY — Fruit juices and drinks and processes and bottling. File 1928-R

3541 — SWITZERLAND — Universal **melting torch** for cutting concrete and steel. **File 2001**

3611—GERMANY — Patented nuclear **continuous measuring and control equipment** for the wire industry. **File 2002**

3679 — SWITZERLAND — Software for computer-controlled warehousing and a programmable logic system with applications in industrial process control. **File 2003**

3714—France—Patented **steering system** for automobiles. **File 2004**

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the International Liaison and Trade Opportunities Staff and other units of the Bureau of Domestic Commerce (BDC), U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms are interested are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers, used extensively by Government and industry.

U.S. firms should also be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

The mark (●) indicates that this trade opportunity is a request for bids by a foreign government agency. A (★) at the end means that additional information may be borrowed by U.S. firms from the individual division of BDC. To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTD indicates that a World Trade Directory Report containing financial and business background information on the foreign firm is available for $2 from the U.S. Department of Commerce, BIC-924, Washington, D.C. 20230 or from any Commerce Field Office.

Agencies

Specific foreign firms have expressed interest in agency agreements for the products listed below. Exclusive agencies for these products are wanted only if specified.

Fruit, tree nut, vegetable farms

01220—HONDURAS—Fresh fruits packed in crates, such as apples, grapes. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N.O. No. 72, San Pedro Sula. WTD in prep.

Miscellaneous agriculture

01930—FRANCE—Aviculture equipment; aviary equipment, supplies. Descriptive literature, price lists requested. Lucien Carrere (importer, dist., agent), a Pouylebon, par 32 Montesquiou. WTD 3/70.

Meat products

20114—FRENCH WEST INDIES—Barrelled pork: snouts, scalp, mask, split feet in 100 lb. barrels. Approx. 1,000 barrels needed. Roger Beaufrand (agent), Boite Postale 58, Fort-de-France, Martinique. WTD 2/71.

20118—HONDURAS—Canned sausages. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

20138—HONDURAS — Canned meats, such as ham, luncheon meats, potted meat, etc. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

Canning, preserving foods

20334—FRENCH WEST INDIES—Florida orange & grapefruit juice; canned, bottled, frozen. Roger Beaufrand (agent), Boite Postale 58, Fort-de-France, Martinique. WTD 2/71.

20334—HONDURAS — Canned fruit juices, nectars, concentrates. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

20334—ITALY—Pineapple, grapefruit concentrated juices. Correspondence requested in Italian, French. Cesare Parissi (mfr.), 3/N and 11/R Via dell'Acqua, Florence. WTD 2/71.

20336—HONDURAS — Catsup, tomato sauces, tomato pastes, etc. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

20338—HONDURAS—Fruit jams, jellies, preserves. Surtidora Internacional, S.A. (imp., dist., agent), 3a. Avenida N.O. No. 72, San Pedro Sula. WTD in prep.

20342—HONDURAS—Soup mixes; dried, dehydrated. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

20352—HONDURAS—Dill pickles, other pickled vegetables, relishes. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

20354—HONDURAS — Salad dressings, mayonnaise, sandwich spread with salad dressing base. Surtidora Internacional, S. A. (importer, dist., agent), 3a. Avenida N. O. No. 72, San Pedro Sula. WTD in prep.

Bakery products

20521—HONDURAS—Biscuits, crackers, cookies, pretzels and snacks, in boxes, tins or plastic bags. Surtidora Internacional, S.A. (importer, dist., agent), 3a. Avenida N.O. No. 72, San Pedro Sula. WTD in prep.

Confectionery

20722—HONDURAS—All types of chocolate candies, in boxes, individual wrappers, bags. Surtidora Internacional, S.A. (importer, dist., agent), 3a. Avenida N.O. No. 72, San Pedro Sula. WTD in prep.

Beverage industries

20870—ITALY—Flavoring extracts for food, beverage, ice cream industries. Correspondence requested in Italian, French. Cesare Parissi (mfr.), 3/N and 11/R Via dell'Acqua, Florence. WTD 2/71.

20872—ITALY—Drink concentrates, including concentrates with kola extract or flavoring. Correspondence requested in Italian, French. Cesare Parissi (mfr.), 3/N and 11/R Via dell'Acqua, Florence. WTD 2/71.

20874—ITALY—Vanilla, vanillin. Correspondence requested in Italian, French. Cesare Parissi (mfr.), 3/N and 11/R Via dell'Acqua, Florence. WTD 2/71.

Food preparations

20993—ITALY—Essential oils, including orange, lemon, grapefruit essential oils, for beverage, food industries. Correspondence requested in Italian, French. Cesare Parissi (mfr.), 3/N and 11/R Via dell'Acqua, Florence. WTD 2/71.

20994—HONDURAS — Baking powders, yeasts. Surtidora Internacional, S.A. (importer, dist., agent), 3a. Avenida N.O. No. 72, San Pedro Sula. WTD in prep.

20994 — HONDURAS — Active dry yeast in 2 lbs. and ½ lb. containers. Agencia Barrett, S. de R. L. (importer, dist., agent), Apartado Postal 96, San Pedro Sula. WTD 12/70.

20999—ITALY—Cumin, arabic gum: powdered. Correspond in Italian, French. Cesare Parissi (mfr.), 3/N and 11/R Via dell'Acqua, Florence. WTD 2/71.

Broad woven fabric mills, cotton

22110—JAMAICA—Chenille bedspreads, all sizes. Lavelanet Logan & Co. (importer, retailer), 99 Harbour St., Kingston. WTD in prep.

Broad woven fabric mills, manmade fiber, silk

22210—GREECE — Velvets for upholstery, manmade fiber. Requests inquiries c.i.f.-Piraeus price quotations. Otto C. Cambouroglou (agent), 2 Vassilikis St., Athens 123. WTD 1/71.

Narrow fabrics

22410—LEBANON — Weather stripping

of woven wool. Naboulsi Freres (importer, dist., mfr.), Sakiet El-Genzir, Ras Beirut, Beirut. WTD 12/70.

Textile goods

22990—SWITZERLAND—Spun bonds for use in connection with carpets, similar applications. Geroma Service AG, Attn: Mr. Vanoers (dist., agent), Widachering 6, 6102 Malters. WTD in prep.

Men's, boys' furnishings

23271 — SWITZERLAND — Men's, boys' jeans, slacks. Sportfashion Ltd. (importer, dist.), Teufenerstrasse 73, 9001 St. Gallen. WTD in prep.

Wood products

24995—CANADA—Handicrafts. Den-Art Studios (importer, agent, retailer), 36 McLeod St., Ottawa 4, Ontario. WTD in prep.

Partitions, shelving, lockers, office, store fixtures

25420—CANADA—Slip-on library shelf labeling devices. Exclusive agency. National Printers Ltd. (mfr.), 1980 Merivale Rd., Ottawa 12, Ontario. WTD in prep.

Furniture, fixtures

25912 — PAKISTAN — Metal venetian blinds. Requests catalogs, quotations, c. & f., Karachi. Gero Corp. (agent), 1 Philips Mansion, 26/146 Drigh Rd., Karachi-8. WTD in prep.

Paperboard mills, products

26311—ITALY—Kraft liner. Correspondence requested in Italian. Annibale Giusti (agent), P.O. Box 74, Lucca. WTD 2/71.

Converted paper, paperboard products

26440—PORTUGAL—Wallpaper. Reis & Ca. Sucrs., Jose da Silva (importer, agent), Rua da Fabrica 5-1°, Oporto. WTD in prep.

26491—SWITZERLAND — Office stationery goods, non-carbon papers, genuine novelties only. Ferd. Spaeti (dist., retailer), Hirschenplatz 10, 6000 Lucerne. WTD 8/70.

26495—CANADA—Pamphlet file boxes of paperboard. Exclusive agency. National Printers Ltd. (mfr.), 1980 Merivale Rd., Ottawa 12, Ontario. WTD in prep.

General commercial printing

27526 — CANADA — Art reproductions. Den-Art Studios (importer, agent, retailer), 36 McLeod St., Ottawa 4, Ontario. WTD in prep.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28423—HONDURAS—Household cleansers such as bleaches, pine oil; toilet deodorants. Surtidora Internacional, S.A. (importer, agent, dist.), 3a. Avenida N.O. No. 72, San Pedro Sula. WTD in prep.

Chemical products

28911 — CANADA — Paste. Exclusive agency. National Printers Ltd. (mfr.), 1980 Merivale Rd., Ottawa 12, Ontario. WTD in prep.

Plastic products

30790—GREECE—Plastic sheets for production of handbags, upholstery for cars, shoes, overcoats, etc. Requests inquiries c.i.f.-Piraeus price quotations. Otto C. Cambouroglou (agent), 2 Vassilikis St., Athens 123. WTD 1/71.

30798—CANADA—Plastic library catalog card protectors; plastic display letters. Exclusive agency. National Printers Ltd. (mfr.), 1980 Merivale Rd., Ottawa 12, Ontario. WTD in prep.

30798—SWITZERLAND — Office rubber, plastics goods. Ferd. Spaeti (dist., retailer), Hirschenplatz 10, 6000 Lucerne. WTD 8/70.

Abrasive, asbestos, nonmetallic mineral products

32990 — CANADA — Ornamental art works, sculptures in wood, metal. Den-Art Studios (imp., agent, retailer), 36 McLeod St., Ottawa 4, Ontario. WTD in prep.

Steel mill products

33150 — PAKISTAN — Nail wire. Requests catalogs, quotations, c. & f., Karachi. Afzal Aslam & Co. (agent), 260 C. Commercial Area, P.E.C.H. Society, Karachi-29. WTD in prep.

Rolling, drawing, extruding of nonferrous metals

33511 — GERMANY — Copper, copper-base alloy wire. Schmitt GmbH (dist., exporter), 5023 Loevenich bei Koeln, Zeissstr. 1. WTD 11/70.

33512 — GERMANY — Copper, copper-base alloy mill products such as rods, bars, sheet, strip, plate. Schmitt GmbH (dist., exporter), 5023 Loevenich b. Koeln, Zeissstr. 1. WTD 11/70.

33521—GERMANY — Aluminum, aluminum-base alloy wire. Schmitt GmbH (dist., exporter), 5023 Loevenich b. Koeln, Zeissstr. 1. WTD 11/70.

33522—GERMANY — Aluminum plate, sheet. Schmitt GmbH (dist., exporter), 5023 Loevenich b. Koeln, Zeissstr. 1. WTD 11/70.

33524 — GERMANY — Rolled aluminum rod, bar. Schmitt GmbH (dist., exporter), 5023 Loevenich b. Koeln, Zeissstr. 1. WTD 11/70.

33525—GERMANY—Extruded aluminum rod, bar. Schmitt GmbH (dist., exporter), 5023 Loevenich b. Koeln, Zeissstr. 1. WTD 11/70.

33526 — GERMANY — Aluminum tube, other rolled, drawn, extruded mill products. Schmitt GmbH (dist., exp.), 5023 Loevenich b. Koeln, Zeisssts. 1. WTD 11/70.

33560—GERMANY — Lead, nickel, zinc semis (plate, sheet, strip, rods, bars, pipe, tubing). Schmitt GmbH (dist., exporter), 5023 Loevenich b. Koeln, Zeissstr. 1. WTD 11/70.

Cutlery, hand tools, general hardware

34231 — VENEZUELA — Hand tools for automotive maintenance service. C.A. Commercial Sosa Martinez (agent), Palo Blanco a Palo Negro N°61-B, Parroquia San José and Apartado 975, Caracas. WTD in prep.

34295 — SWITZERLAND — Novelties, hardware for office use. Ferd. Spaeti (dist., retailer), Hirschenplatz 10, 6000 Lucerne. WTD 8/70.

Fabricated metal products

34940—FRANCE — Valves, accessories: gate valves, globe valves, butterfly valves, check valves, plug and boll valves, solenoid valves, strainers, steam traps. Descriptive literature, price lists requested. Agero S.A. (importer, dist., agent), 232, 234 rue Camille-Godard, 33 Bordeaux. WTD 1/70.

34940 — SOUTH AFRICA — Gate and globe type valves made to A.P.I. standards. Bells Africa, Attn: M. F. Spencer (importer, dist., mfr.), P.O. Box 8035, Elandsfontein, Transvaal. WTD in prep.

Engines, turbines

35190—ENGLAND—Diesel engine injection equipment, filters, for marine application. Reginald Christie & Dickinson Ltd. (dist., mfr.), 27 Chancery Lane, London, W.C.2. WTD in prep.

35193—PHILIPPINES—Spare parts for industrial diesel engines. Urra Marketing (dist., agent), SPCMA Bldg., San Juan St., Bacolod City. WTD in prep.

Farm machinery

35220 — SWITZERLAND — Snow plows, snow throwers, garden tractors, cultivators, municipality vehicles. Intravend AG (dist., mfr., agent), P.O. Box, 8048 Zurich. WTD 2/71.

Construction, mining, materials handling machinery, equipment

35310 — PAKISTAN—Mobile workshops for heavy construction/earthmoving machinery. Requests catalogs, quotations, c. & f., Karachi. Groupe Marketing Ltd. (agent), American Life Bldg. Annex, Ground Floor, I.I. Chundrigar Rd., Karachi-2. WTD in prep.

35310—SWITZERLAND — Construction machinery, all kinds, incl. off-the-road vehicles, municipality vehicles. Intravend AG (dist., mfr., agent), P.O. Box, 8048 Zurich. WTD 2/71.

35310 — SWITZERLAND — Construction machinery for soil stabilization. Oscar Meier Import (dist., agent), Maienriedweg 13, 2500 Bienne. WTD in prep.

35319 — SWITZERLAND — Maintenance vehicles for municipal and public services, such as small tractors, mowers, snowblowers, construction machinery, in particular railway maintenance machinery. ConMat AG (importer, dist.. agent). Seestrasse 234, 8810 Horgen. WTD 3/70.

Metalworking tools

35480—VENEZUELA—Handtools, metalworking, power driven. C.A. Comercial Sosa Martinez (agent), Palo Blanco a Palo Negro N°61-B, Parroquia San Jose and Apartado 975, Caracas. WTD in prep.

35484 — SWITZERLAND — Automotive diagnostic and repair equipment, service station apparatus, automobile maintenance instruments, tools of all kinds. Offers for advanced equipment requested from manufacturers only. SAFIA, Attn: A. R. Bolliger (importer), Kanzleistrasse 80, 8026 Zurich. WTD 1/71.

35484 — SWITZERLAND — Automotive maintenance equipment, diagnostic instruments, garage and service station equipment, tools, analyzers, novelty products for automotive repair trade. Requests offers from manufacturers only. Baumgartner AG, Attn: Karl Baumgartner, Pres. (importer, dist., agent), Schaffhauserstrasse 14/16, 8042 Zurich. WTD 2/70.

Special industry machinery

35521—GERMANY — Special machinery

for spinning, weaving, and finishing; machinery for non-woven fabrics; needle looms. Ing. Erich Faelschle (agent), D-7340 Geislingen/Steige, Schlachthausstrasse 13. WTD 2/71.

35550—BRAZIL—Recent types of printing trade, allied machinery, as well as pertinent blankets, zinc and aluminum plates, films. S. H. Eskenazi & Cia. Ltda. (agent), Rua Conselheiro Brotero 415/19, Barra Funda, Caixa Postal 1890, Sao Paulo, SP. WTD 1/71.

35595 — SWITZERLAND — Tobacco vacuum humidifiers, tobacco working machinery. Polymer AG, Attn: H. O. Wirth (dist., agent), Schwarztorstrasse 57, 3000 Bern. WTD in prep.

General industrial machinery

35610—PHILIPPINES — Pumps, deep-well turbine, water & oil lubricated, sizes 4" to 14", capacities—75-3000 GPM; pumps, deep-well submersible, single & three phase motor, for well casing of 4" dia. up, capacities—15GPM–1000 GPM; pumps, high head centrifugal, for irrigation, single and multi-stages, end suction type, 2"-6", capacities—100-1500 GPM, 140-250 ft. TDH, 1800 RPM; pumps for irrigation, single and multi-stages, 2"-10"—45000GPM, 140-350 ft. TDH, 1800 RPM; pumps, centrifugal, for sugar milling industry, to handle condensate water, diluted cane mixed juice, cane mixed juice with bagasse; sprinklers, 25-300 GPM, 50-100 psi; irrigation equipment, portable for use with aluminum tubing. Urra Marketing (dist., agent), SPCMA Bldg., San Juan St., Bacolod City. WTD in prep.

35612 — KOREA — Gasoline driven deep-well pumps, capable of 100-300 ft. underground; 4-in. pipe at bottom, 500 units. Requests specifications, quotations. Sung Pung Enterprises Co. (importer, dist., agent), I.P.O. Box 2089, Seoul. WTD 4/70.

35690—CANADA—Industrial waste disposal systems: air, gas, waste treatment, solid waste disposal equipment, ie: incineration equipment, pollution, other allied equipment. Taylor Engineering & Construction Co. Ltd., B. Tyson, Marketing (dist., agent, mechanical construction contractors), 111 Stephenson Ave., Toronto 13, Ontario. WTD in prep.

Office, computing machines

35731—JAPAN — Mini-computers, data terminal equipment. Electro Marketing Corp. (importer, agent), 8 Sanei-cho 1-chome, Shinjuku-ku, Tokyo. WTD 1/71.

35791—CANADA — Moisteners. Exclusive agency. National Printers Ltd (mfr.), 1980 Merivale Rd., Ottawa 12, Ontario. WTD in prep.

35791—SWITZERLAND—Novelty office machines, devices, apparatus, supplies, incl. photocopying equipment. Ferd. Spaeti (dist., retailer), Hirschenplatz 10, 6000 Lucerne. WTD 8/70.

Service industry machines

35852—THAILAND — Air-conditioners, room, 8,000 to 26,000 B.T.U. Requests catalogs, c.i.f. Bangkok prices. Kittipongse Ltd. Partnership (importer, wholesaler), 30 Plubplachai Rd., behind Wat Thepsirintr, Bangkok. WTD in prep.

Electric transmission, distribution equipment

36110 — SWITZERLAND — Precision measuring instruments for electronics, telecommunications industries. Silectra, G. Glatz & Co. (importer, dist., agent), Seebahnstrasse 109, 8036 Zurich. WTD 1/71.

Radio, television receiving sets

36514—SWITZERLAND—Hi-fi stereo amplifiers, tuners, radio combinations, stereo pillows, stereo headphones; video recorders, professional audio-visual equipment. APCO AG (importer, dist., agent), Raeffelstrasse 25, 8045 Zurich. WTD 1/71.

36520—SWITZERLAND — Music-cassettes, magnetic tape, pre-recorded. APCO AG (importer, distributor, agent), Raeffelstrasse 25, 8045 Zurich. WTD 1/71.

Communication equipment

36621—AUSTRIA — Television camera mountings. Frederick G. Smith (importer, dist./wholesale, agent), Lagergasse 1/11, A-1030 Vienna. WTD 1/71.

36622 — TAIWAN — Radio, television broadcast equipment including broadcast recorders, control consoles, switchers, turntable, AM & FM transmitters and RF power amplifier, television trainer, integrate circuit trainer, logic trainer for electronic schools, institutes. Telestar Corp., Ltd. (importer, agent, exporter), P.O. Box 3013, Taipei. WTD 1/71.

36624—SWITZERLAND—Aviation communication equipment, airborne navigational instruments, transponders. Silver Menasse (agent, marketing coordinator for Europe), 24, ave. C.-F. Ramuz, 1009 Pully. WTD in prep.

Electronic components, accessories

36790—GERMANY — Electronic components. Prices c.i.f. Hamburg or Bremen. Techmation Ges. fuer Messtechnik Automation mbH (importer, distributor), 34 Harff-Strasse, 4 Duesseldorf. WTD 6/70.

36790—SWITZERLAND — Capacitors, resistors, pins and sockets, printed circuit boards, drilling boards, bushes, novelty electronic accessories. Possibly exclusive distribution rights in Europe. Tekmar SA (distributor, agent), 94, rue des Eaux-Vives, 1207 Geneva. WTD in prep.

36795—SWITZERLAND — Unrecorded magnetic tape cassettes for portable tape recorders. APCO AG (importer, dist., agent), Raeffelstrasse 25, 8045 Zurich. WTD 1/71.

Electrical machinery, equipment, supplies

36920—SWITZERLAND—Primary batteries for portable radios, television receivers, tape recorders. APCO AG (importer, dist., agent), Raeffelstrasse 25, 8045 Zurich. WTD 1/71.

Aircraft, parts

37290—SWITZERLAND — Aviation communication equipment, transponders, aviation electronics, airborne navigational instruments, DC 8, 9 components. Silver Menasse (agent, marketing coordinator for Europe), 24, ave. C.-F. Ramuz, 1009 Pully. WTD in prep.

Railroad equipment

37420—SWITZERLAND — Electric personnel carriers for industrial applications. Oscar Meier Import (dist., agent), Maienriedweg 13, 2500 Bienne. WTD in prep.

Engineering, laboratory, scientific, research instruments

38112—SWITZERLAND—Precision laboratory instruments for laboratories, electronics, telecommunications. Silectra, G. Glatz & Co. (importer, dist., agent), Seebahnstrasse 109, 8036 Zurich. WTD 1/71.

Instruments for measuring, controlling, indicating physical characteristics

38213—GERMANY — Electrical servo drives or other hydraulic or electrical control components. Preference given to items with large scale application potential in small to medium machine range. Pegasus-Hartmann Servicenter (importer, dist.), 6079 Buchschlag, Im Steingrund 2.

38213 — JAPAN — IC testers. Electro Marketing Corp. (importer, agent), 8 Sanei-cho 1-chome, Shinjuku-ku, Tokyo. WTD 1/71.

Surgical, medical, dental instruments

38410—SWITZERLAND — Advanced medical equipment, instruments such as infusion flow controllers, temperature monitors, electronic thermometers, pulse monitors, pressure monitors, pressure transducers, pacemakers, simulators, electrocardiographs. Possibly exclusive rights for Europe. Tekmar SA (dist., agent), 94, rue des Eaux-Vives, 1207 Geneva. WTD in prep.

38410—SWITZERLAND — Advanced medical instruments; medical electronics; monitoring and intensive care systems; x-ray apparatus; medical supplies, accessories, all kinds. Ing. Ruegge AG (importer, dist., agent), Austrasse 19, 5430 Wettingen. WTD 12/70.

38420—SWITZERLAND—Surgical instruments, appliances, supplies, advanced design. Possibly exclusive distribution rights in Europe. Tekmar SA (dist., agent), 94, rue des Eaux-Vives, 1207 Geneva. WTD in prep.

38421 — SWITZERLAND — Orthopedic products, orthopedics surgery implants, instruments. Osteo AG, Attn: R. Chevalier, Business Mgr. (dist., mfr.), Romerstrasse 15, 2575 Selzach. WTD 2/71.

Photographic equipment

38610 — PAKISTAN — Motion picture films. Requests catalogs, quotations, c. & f., Karachi. A. S. Ibrahim Manawadarwala (agent), P.O. Box 4537, Atmaram St., Kharadhar, Karachi-2. WTD in prep.

38611—AUSTRIA—Air reconnaissance cameras. Frederick G. Smith (importer, dist./wholesale, agent), Lagergasse 1/11, A-1030 Vienna. WTD 1/71.

38612—SWITZERLAND—Office photocopying equipment, supplies. Ferd. Spaeti (dist., retailer), Hirschenplatz 10, 6000 Lucerne. WTD 8/70.

38613—NETHERLANDS — Electro-optical instruments for recording scientific phenomena on photographic plate, film or paper (e.g. photographic, X-ray, infrared equipment); instruments for evaluation of such records (e.g. microdensitometers, film analysis equipment). Exclusive agencies and/or representations requested for West European countries. Alpha Omega International (importer, dist., agent), 23 Kettingweg, Baarn. WTD 2/71.

Toys, amusement, sporting goods

39493—JAPAN — American football protectors, water ski equipment. Nojima Co., Ltd. (dist., mfr., retailer), 1-4 Kanda Jimbo-cho, Chiyoda-ku, Tokyo. WTD in prep.

Manufacturing industries

39999 — CANADA — Oil paintings. Den-Art Studios (importer, agent, retailer), 36 McLeod St., Ottawa 4, Ontario. WTD in prep.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Meat products

20111 — PHILIPPINES — Frozen beef trimmings, briskets for making sausages. Ed. A. Keller & Co., Ltd. (importer, dist., agent), 2723 Pasong Tamo Extension, Makati, Rizal. P.O. Box 452, Manila. WTD in prep.

20114 — PHILIPPINES — Frozen pork liver for manufacture of liver spread; frozen pork bellies for making bacon; frozen pork jowls for making sausages; frozen pork back fat for manufacture of pork and beans; frozen pork trimmings, with or without lean, for sausages. Ed. A. Keller & Co., Ltd. (imp., dist., agent), 2723 Pasong Tamo Extension, Makati, Rizal. P.O. Box 452 Manila. WTD in prep.

20115—KOREA—Lard: commercial size, titer 40.8°C; free fatty acid (as oleic) 2.9%; moisture & volatile matter 0.37%; insoluble impurities 0.08%; unsaponifiable matter 0.52%; color (FAC Standard) nor darker than 13; boemmer No. 70.7. Annual requirements estimated about 5,000 M/T. Requests quotations, terms. Direct purchase & agency. Sam Yang Foods Co., Ltd. (importer, mfr., agent), 118-4, 3-ka, Ulchi-ro, Chung-ku Seoul. WTD in prep.

Beverage industries

20851—FRANCE — Products of distilleries, industrial alcohol plants such as whiskey, spirits, other distilled liquors including gin. Price lists requested. Correspondence requested in French. William Pitters S.A. (importer, dist.), 24-26 rue de Saget, 33 Bordeaux. WTD 3/70.

Food preparations

20941 — KOREA — Extra fancy tallow, moisture 0.27%; insoluble 0.06% unsaponifiable 0.40%; free fatty acid (as oleic) 0.90%; color (FAC) NDT1; titer 41.2°C. Annual requirements estimated about 11,000 M/T. Requests terms, quotations. Direct purchase & agency. Sam Yang Foods Co., Ltd. (importer, mfr., agent), 118-4, 3-ka, Ulchi-ro Chung-ku, Seoul. WTD in prep.

Broad woven fabric mills, cotton

22117—GERMANY—Cotton velvets, velveteens for lining of jewelry cases, sample cases, similar items. Otto Wild, Etuifabrik (mfr., exporter), D-7530 Pforzheim, Fritz-Ungerer-Strasse 5. WTD 2/71.

Broad woven fabric mills, manmade fiber, silk

22210—AUSTRIA — Drapery and home decorating fabrics: shantung, shantung satin, double satin and "stries". Rudolf Schantl (importer, dist., retailer), Landstrasse 47, A4020 Linz/D. WTD 1/71.

22218—GERMANY—Silk, manmade fiber lining fabrics for lining of jewelry cases, sample cases, etc. Otto Wild, Etuifabrik (mfr., exporter), D-7530 Pforzheim, Fritz-Ungerer-Strasse 5. WTD 2/71.

Dyeing, finishing textiles, except wool fabrics, knit goods

22628 — FRANCE — Manmade fibers for manufacture of women's lingerie, working blouses, raincoats. Balay S.A.R.L. (mfr.), Boite Postale 16, 42—Saint Etienne. WTD in prep.

Millwork, veneer, plywood, prefabricated structural wood products

24315—SWITZERLAND—Fiberglass reinforced doors for garages, stock warehouses, similar applications. Direct purchase & agency. Schneider & Co. AG. Attn: Mr. Vogelsanger (dist., mfr.), Scheideggstrasse 2, 8400 Winterthur. WTD in prep.

Household furniture

25143—FRENCH WEST INDIES—Garden furniture, especially aluminum. Ets. Merlande, Attn: Benoit de Montserrat (imp., retailer), 26, Rue Blénac, Fort-de-France, Martinique. WTD in prep.

Industrial chemicals

28180 — NETHERLANDS — Industrial chemicals. Exclusive direct representations requested on direct purchase or agency basis. C. N. Schmidt N.V. (importer, dist., agent), 8 Jan Rebelstraat, Amsterdam. WTD 2/71.

Synthetic materials

28210 — ITALY — Acrylic (plexiglass) sheets. Correspondence requested in French, Spanish, Italian. Tanino di Tamietti G. & C. (dist., mfr., agent), 506 Corso Moncalieri, Turin, 10133. WTD 2/71.

28214—FRENCH WEST INDIES — All raw materials, machinery, technical data for manufacture of polyurethane foam. S.I.A.P.O.C., Société Industrielle Antillaise de Peinture Chimiques (mfr.), 120, Rue Joseph Lagrosillière, Trinité, Martinique. WTD in prep.

Drugs

28340 — NETHERLANDS — Pharmaceutical preparations for human use. Exclusive direct representations requested on direct purchase or agency basis. C. N. Schmidt N.V. (importer, dist., agent), 8 Jan Rebelstraat, Amsterdam. WTD 2/71.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28413 — MAURITIUS — Antiseptic soap for skin diseases. M.E. Timol & Co. (agent), 15, Royal St., Port Louis. WTD in prep.

28440—MAURITIUS — Hair removing cream cosmetics; M.E. Timol & Co. (agent), 15, Royal St., Port Louis. WTD in prep.

Paints, varnishes, lacquers, enamels

28516 — GERMANY — Paints, undercoaters, primers for automobiles. Direct purchase & agency, Horst D. Neumann, (importer, dist.), 9 Merzigerstrasse, 4 Duesseldorf-Nord. WTD 12/70.

Petroleum refining

29110—TAIWAN — Paraffin wax for making wax figures, candles. China Handicrafts Corp., Ltd. (mfr., retailer, exporter), 5, Lane 84, Yung Yu St., Tainan. WTD in prep.

Plastic products

30791 — GERMANY — Plastic material (high impact polystyrene) for production of sample cases, jewelry cases, etc. Otto Wild, Etuifabrik (mfr., exporter), D-7530 Pforzheim, Fritz-Ungerer-Strasse 5. WTD 2/71.

Footwear, except rubber

31411 — FRENCH WEST INDIES — Men's shoes, good quality. Ets. Merlande, Attn: Benoit de Montserrat (importer, retailer), 26, Rue Blenac, Fort-de-France, Martinique. WTD in prep.

Steel mill products

● **33100 — INDIA** — 5,000M/T hot rolled mild steel coils. Bid deadline Apr. 13; Tender No. P/202/49/199 & 202/15.1.71/PL. Directorate General, Supplies & Disposals. Parliament St., New Delhi. Tender documents available from India Supply Mission, 2536 Massachusetts Ave., NW., Washington, D.C. 20008. Tender fee $2.50 each.

● **33100 — NEW ZEALAND** — 250 steel tires for railway rolling stock to B.S. 24 part 2 section 1 high tensile. Bid deadline Mar. 24; Tender No. S.71/627. Comptroller of Stores, New Zealand Railways, Private Bag, Wellington. Limited quantity of tender documents and drawings available from Iron & Steel Industry Operations, BDC, Dept. of Commerce, Washington, D.C. 20230 ★(202-967-4412).

Rolling, drawing, extruding of nonferrous metals

● **33500—IRAN**—Supply of 250 km. of 63 KV oil filled cable and accessories. Tender No. IB/OC/01.71; bid deadline Apr. 6. Contact Tehran Regional Electric Co., Jaleh Sq., Tehran.

● **33500—THAILAND** — Aluminum conductor, bare, 37 strand, "Arbutus", 100,000 meters. Bid deadline Apr. 5; Tender No. MEA-FSD-226. Purchase & Stores Dept., Metropolitan Electricity Authority, 121 Chakraphet Rd., Bangkok 2. Copy of Tender Document available from Aluminum & Magnesium Industries Operations, BDC, Dept. of Commerce, Washington, D.C. 20230 ★ (202-967-4579).

Cutlery, hand tools, general hardware

34291—GERMANY — Automobile hardware. Prices c.i.f. European ports. Metallwerk Frese GmbH (importer, dist., mfr.), 23 Moltkestrasse, Postfach 26, 5672 Leichlingen. WTD 11/70.

Fabricated wire products

34814 — NETHERLANDS — Metal wire gauzes. Direct purchase and representations requested. J. Kabel & Zoon N.V. Attn: B. W. Oldenboom (importer, dist., agent), P.O. Box 130, Zaandam. WTD 1/71.

Fabricated metal products

34990—MAURITIUS—Ice cream freezers for household use. M. E. Timol & Co. (importer, agent), 15, Royal St., Port Louis. WTD in prep.

Construction, mining, materials handling machinery, equipment

● **35300—BURMA**—One cylinder boring machine, size up to five inches; one pneumatic loader; one scrapehauler; rail lines, ten magnets, grinding machines, and work shop equipment. Tender No. 124/01; bid deadline Mar. 20. Dir.-Gen., Mineral Development Corp., Rangoon. Terms and specifications available on short term loan from the General Industrial Equip. Div., Dept. of Commerce, BDC-647, Washington, D.C. 20230 ★(202-967-4318).

● **35300 — PHILIPPINES** — Mining machinery, equipment to increase rated capacity of copper plant from 1,000 to 1,500 tons per day and the development of 170 mineral claims containing principally copper Inco Mining Corporation, 2277 Pasong Tamo Extension, Makati, Rizal WTD in prep.

35314—KOREA—Power cranes for use in loading, unloading logs, maneuverable, 15 tons, 5 each. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

35318 — KOREA — Road building equipment: bulldozers, Caterpillar D7F or equal, eight each; graders, two each; rollers, two each. Requests brochures, quotations f.o.b., c.i.f./Indonesian ports. Dong Ah Construction Ind. Part Co., Ltd. Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

35319 — KOREA — Forest tractors for skidding, loading logs in rough terrain in jungle tree harvesting, 15 M/T, four each; log loaders, articulated sizes, "Pay loader" or equal, 125 to 500 flywheel horsepower, four each. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro Chung-ku, Seoul. WTD 12/70.

Metalworking machinery

35414—KOREA—Saw teeth reconditioning machinery, power operated, three each. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

35442—MEXICO—Injection molds (steel) to be attached to plastic injection machines with 4-6 ounce capacity for molding plastic toys. Plasticos Iga (importer, mfr.). Apartado Postal 2564, Monterrey, N.L. WTD in prep.

35485—MEXICO—Used (3-4 years old) wire-drawing machine to utilize 5/16 stock (reducing to 16-18 calibre); minimum capacity 4 tons daily, using 6 heads. Also acceptable would be 7 or 9 heads, with correspondingly higher production. Correspondence requested in Spanish. Alamabres de Mexico, S.A. (mfr.), Sr. Lic. Emilio Riva Palacio Jr., Perfiles y Alamabres de Mexico. S.A., Calle Union 158, Col. Pantitlan, Mexico 9, D.F. WTD in prep.

Special industry machinery

● **35500—VIETNAM**—Complete printing plant including design manufacturing for producing 10 million lottery tickets weekly. Bid No. 001/70/SKT/IDC; bid deadline Apr. 1. Industrial Development Center, 40-42 Nguyen Hue Blvd., Saigon. Copies of conditions and specifications may be obtained from GIE Div., Dept. of Commerce, Washington, D.C. 20230 ★(202-967-5589).

35512—KOREA—Doughnut making machines, Belshaw Bros. Inc.'s model DR-#3183, 60 cycle or equal, five units as trial order. Brochures, quotations requested. Sung Jin Corp., Ltd. (importer, agent), C.P.O. Box 5091, Seoul. WTD in prep.

35512—MEXICO—Potato peeling, slicing, washing machinery for preparation of snacks such as potato chips, etc. with capacity of 2 tons per 8 hr. shift. Sr. Antonio C. Moreno Productos Tico (importer, mfr.), Reforma Pte. 1522, Monterrey, N.L. WTD in prep.

35513 — ISRAEL — Machinery, related equipment for processing, vacuum-packing of meats. Greenbro Manufacturing Co. Ltd. (mfr., exporter), 67 Atzmaut St., Bat-Yam. Attn: Robert Greenstein, Pres. WTD in prep.

35513 — JAMAICA — Packaging machinery for weighing, sealing, stamping fruit, vegetables for retail trade. Quotations c.i.f. Kingston. Requests specifications, prices. Agricultural Marketing Corp. Attn: R. K. Aquart (importer, dist., retailer), 188 Spanish Town Rd., Kingston 11. WTD 2/71.

35513—KOREA—Sugar refinery machinery: dryer, cooler oven for sugar, Roto-Lower or equal, 20 T/HR—one each; kiln oven for regeneration of granular carbon, Herreship type or equal—one each; automatic packaging machine for granulated sugar: for 15 to 30 kg paper bags—one each; for 500 to 1,000 gr. polyethylene bags—one each. Brochures, quotations, both f.o.b. & c. & f./Ulsan requested. Sam Yang Co., Ltd., Attn: Ryung Hur (importer, dist., mfr.), I.P.O. Box 1797, Seoul. WTD in prep.

35513—MEXICO—Packaging machinery for packing snacks such as fried potato chips etc. with capacity 50 to 60 bags per min. with average weight of between 30-100 grams per bag. Sr. Antonio C. Moreno Productos Tico (importer, mfr.), Reforma Pte. 1522, Monterrey, N.L. WTD in prep.

35531 — KOREA — Saw mill equipment, portable, two sets; chain saw, 8 ft., 2-man operating, 20 sets. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

35593—SOUTH AFRICA — Specialized machinery for expanded polystyrene capable of producing pleasure boats (polystyrene) 11½ ft. long, 5.1 ft. wide, 1½ ft. high. Superplas (Pty.) Ltd., Attn: A. Horstmanshof (importer, mfr.), P.O. Box 61515, Marshalltown, Transvaal. WTD in prep.

35595 — MEXICO — Machinery for processing of poultry manure for cattle, swine feed; fertilizer uses. Machinery should include a mixer, drier, sterilizer, bag packer. Dr. Pablo Serna Trevino (importer, mfr.), Larga Vista 105, Colonia Linda Vista, Guadalupe, N.L. WTD in prep.

35595 — TAIWAN — Machinery, equipment for making wax figures, candles. China Handicrafts Corp., Ltd. (mfr., retailer, exporter), 5, Lane 84, Yung Yu St., Tainan. WTD in prep.

Special Action

Each of the following trade notices is deemed to rate the special attention of American manufacturers and suppliers by the U.S. Commercial Officers overseas.

28993 — NETHERLANDS — All kinds of water pollution control, prevention materials, including water treatment, chemical cleaning compounds. Houseman & Dirkzwager N. V., Attn: C. W. Looman, Gen. Mgr. (importer, dist./exporter, mfr.), 10 Marconilaan, or P.O. Box 190, Bergen Op Zoom. WTD 2/70.

35733 — SWITZERLAND — EDP software, commercial programs for IBM 360 (20-40), Univac 9000 series computers. Data Center Luzern AG, Attn: E. Erb, Mgr. (dist., agent, EDP business service co.), Pilatusstrasse 60, 6000 Lucerne. WTD 10/70.

35892 — NETHERLANDS — All kinds of water pollution control, prevention equipment, including water treatment, chemical cleaning apparatus. Houseman & Dirkzwager N. V., Attn: C. W. Looman, Gen. Mgr. (importer, dist./exporter, mfr.), 100 Marconilaan, or P.O. Box 190, Bergen Op Zoom. WTD 2/70.

36790 — SWITZERLAND — Electronics raw materials, capacitors, integrated circuits and chips, transistors, diodes, flat-cable connectors, ceramic substrates, flat cables, chromium deposited glass substrates for photo techniques. Requests replies from manufacturers only. Contiflex AG, Attn: Fred Bolleter (importer, dist., agent), Florastrasse 17, 8700 Kusnacht. WTD in prep.

38212—KOREA—Integrating meters, nonelectrical type, compact fuel flow meters; 100 sets first year, 500 sets annually thereafter. Requests brochures, quotations, engineering information. Korea Pollution Preventive Corp. (importer, agent, engineering services for pollution control), K.P.O. Box 207, Seoul, Attn: Lieu Keun Duk. WTD 12/70.

General industrial machinery

35616—THAILAND — Knock-down parts of motor compressors for air-conditioners, refrigerators, sizes from 1/10 to 5 h.p., to be assembled locally. Requests catalogs, c.i.f. Bangkok prices. Siam Engineering Co. (repair service), 247/17 Phibulsongkram Rd., near Samyek Nonthaburi, Nonthaburi. WTD in prep.

35673—PHILIPPINES—One crucible induction furnace, used, capacity: 200 kg. per hr.; one crucible induction furnace, used, capacity: 2 tons per hr.; one crucible induction furnace, used, capacity: 3 tons per hr. Filipino Pipe & Foundry Corp. (mfr.), Hulo, Mandaluyong, Rizal, P.O. Box 1329, Manila. WTD 9/70.

35690—AUSTRIA — General industrial machinery, equipment, supplies. Direct purchase & agency. Multipharm, Dr. et. Mr. F. Hinterstoisser, Attn: Johann M. Sarkitsch (importer, agent, wholesaler), Strehlgasse 32, A-1190 Vienna. WTD 12/70.

35690—GERMANY—Industrial air filters, aluminum. Requests quotations f.o.b. U.S. port. DV GmbH & Co. KG (dist., mfr.), 6340 Dillenburg, Postfach 164. WTD 2/71.

Office, computing machines

● **35700—PARAGUAY**—Supply of electronic data processing equipment. Tender No. JSDE 30/71; bid deadline Mar. 19. Invited by the National Electric Power Administration (Administracion Nacional de Electricidad-Ande). Terms and specifications may be purchased from: Gerencia Commercial de Ande, Calle Padre Cardezo 560, Asuncion, for $20 per set.

35731—NETHERLANDS — Electronic process control equipment. Exclusive sales rep. requested. N. V. Fabriek en Handelsbureau "Nederland", Attn: G. Schuit (importer, dist., mfr.), 22 Donkere Spaarne, Haarlem. WTD 2/71.

Service industry machines

35891—MEXICO—Deep fat frying machine for frying of snacks such as potato chips, etc. with capacity of 2 tons per 8 hr. shift. Sr. Antonio C. Moreno Productos Tico (importer, mfr.), Reforma Pte. 1522, Monterrey, N.L. WTD in prep.

Electric transmission, distribution equipment

● **36100—CYPRUS**—Supply 192 11,000/433-250 volt distributors transformers, from 15 KVA single phase pole mounted to 1,000 KVA 3-phase. Tender No. 94/1971, Ref. E.1/787/871/71; bid deadline Mar. 24. Specifications available for U.S. $48 from the Gen. Mgr. & Chief Engineer, Electricity Authority of Cyprus, P.O. Box 1466, Nicosia. Financed by Electricity Authority of Cyprus.

● **36100—NEW ZEALAND**—Supply and delivery one 50 MVA 110/33 KV transformer bank for Masterton Substation. Contract No. 562; bid deadline May 11. Secretary, Tenders Committee, New Zealand. Specifications available from the Power & Electrical Equip. Div., BDC, Rm. 5886-C, Dept. of Commerce, Washington, D.C. ★ (202-967-4241).

● **36100—PARAGUAY**—Supply 520 10-KVA and 100 25-KVA distribution transformers. Tender No. ANDE-BID-26/7; bid deadline Mar. 23. Specifications available for U.S. $25 including airmail from Gerencia Comercial, ANDE, Calle Padre Cardozo 560, Asuncion. Financed by Inter American Development Bank.

36122—VENEZUELA—Power and distribution transformers for industrial use. Direct purchase & agency. Correspondence requested in Spanish. C. A. Cuvensa (dist., agent), Centro Industrial Apolo 11, 2do piso, 4a transversal, Boleita, and Apartado 61.053, Caracas. WTD 2/71.

36133—JAPAN—Portable circuit breaking device for use with electric power tools in field work to prevent ground fault. Taiyo Denki Kogyo K.K. (dist., mfr.), 1-28 Nishi-Iwata 3-chome, Higashi-Osaka, Osaka Pref. WTD 1/70.

Electrical industrial apparatus

36213—KOREA—Generators, 50 to 100 KW diesel engine, three. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

36215—VENEZUELA — Motor-generator for industrial use. Direct purchase & agency. Correspondence requested in Spanish. C. A. Cuvensa (dist., agent), Centro Industrial Apolo 11, 2do piso, 4a transversal, Boleita, and Apartado 61.053, Caracas. WTD 2/71.

36220—NETHERLANDS—Electrical industrial process controls. Exclusive sales rep. requested. N. V. Fabriek en Handelsbureau "Nederland", Attn: G. Schuit (importer, dist., mfr.), 22 Donkere Spaarne, Haarlem. WTD 2/71.

Household appliances

36310—MAURITIUS—Domestic electric appliances, e.g. refrigerators, stoves, smaller appliances. M. E. Timol & Co. (importer, agent), 15, Royal St., Port Louis. WTD in prep.

36341—MAURITIUS—Household electric fans; table fans in particular. M. E. Timol & Co. (importer, agent), 15, Royal St., Port Louis. WTD in prep.

36343—ISRAEL — Electrical household appliances to include meat/food grinders, mixers, choppers; automatic icemaking machines for refrigerators; hand/face/hair dryers; dehumidifiers, for home and public places; electric blankets, etc. Electric power: 230 volt, 50 Hz. Katz, M.A. (importer, dist., retailer), 42, Ibn Gevirol St., Tel Aviv. WTD in prep.

Electric lighting, wiring equipment

36425 — **ISRAEL** — Outdoor lighting equipment for airports. Direct purchase & agency. Levenson Bros. Engineers Ltd. (importer, agent), 33 Hahashmal St., P.O. Box 390, Tel Aviv. WTD 6/70.

36426—NETHERLANDS — Emergency lighting equipment. Exclusive rep. N. V. Fabriek en Handelsbureau "Nederland", Attn: G. Schuit (importer, dist., mfr.), 22 Donkere Spaarne, Haarlem. WTD 2/71.

36430—FRANCE—Current carrying wiring devices such as switches, contacts, etc. Arnould Electro Industrie (importer, dist., mfr.), 15 rue de Madrid, 75—Paris 8. WTD 1/71.

Radio, television receiving sets

36520—FRENCH WEST INDIES—Photograph records. Etablissement Merlande Attn: Benoit Montserrat (importer, retailer), 26, Rue Blenac, Fort-de-France, Martinique. WTD in prep.

Communication equipment

36621—KOREA—Two-way radio, including transceivers, high frequency, to cover distances 300 to 500 miles, two sets; walkie-talkies, six sets. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

36624—ISRAEL—Electronic navigational aids for aircraft, ground installation. Direct purchase & agency. Levenson Bros. Engineers Ltd. (importer, agent), 33 Hahashmal St., P.O. Box 390, Tel Aviv. WTD 6/70.

36626 — **GERMANY** — Electronic equipment for use in textile industry. Direct purchase & agency. Wolf N. J. Nitschke GmbH (importer, dist., agent), Box 430, 4 Duesseldorf-Oberkassel. WTD 11/70.

Electronic components, accessories

36790—FRANCE — Electronic components, accessories. Arnould Electro Industrie (importer, dist., mfr.), 15 rue de Madrid, 75—Paris 8. WTD 1/71.

Motor vehicles, equipment

37112—KOREA—Rolley, 20 M/T, with hoist for log loading, 30; 4 dump trucks. Dong Ah Construction Ind. Part Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

37141—GERMANY — Automobile accessories, parts of all kinds. Prices c.i.f. European ports. Metallwerk Frese GmbH (importer, dist., mfr.), 23 Moltkestrasse, Postfach 26, 5672 Leichlingen. WTD 11/70.

Aircraft, parts

37211—KOREA—Helicopter for 3 persons. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

37212—VENEZUELA—Helicopters. Salta C.A. (dist., retailer, agent), P.O. Box 51134, Caracas. WTD 2/71.

37222—VENEZUELA—Aircraft engines. Salta C.A. (dist., retailer, agent), P.O. Box 51134, Caracas. WTD 2/71.

37224—VENEZUELA—Aircraft engine, accessories. Salta C.A. (dist., retailer, agent), P.O. Box 51134, Caracas. WTD 2/71.

Ship building, repairing

37311—KOREA—Pontoon, 50 M/T. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

37313—KOREA—Tug boat, 50 M/T class, three; for hauling log rafts through narrow jungle channels. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-Ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

37321—KOREA—Speed boat, 33 hp., for sailing through jungle channels, harbors, 3. Dong Ah Construction Ind. Part. Co., Ltd., Attn: Young Woong Kim (importer, mfr., construction engineer), 24-3, 1-ka, Chungmu-ro, Chung-ku, Seoul. WTD 12/70.

Engineering, laboratory, scientific, research instruments

● **38100—PAKISTAN** — Supply of 20 hanging poles; ten engineers chains; four pantographs; two map measures. Tender No. S-9/364/SCI/66-67/IDA; bid deadline Mar. 31. Invited by the Director of Supply, Government of East Pakistan, 48 Motijheel Commercial Area, Dacca-2. Cable: "SUPPLY", Dacca. Terms and specifications available on loan from Business & Scientific Equip. Div., BDC-653, Dept. of Commerce, Washington, D.C. 20230. ★ (202-967-2939).

38112—GERMANY—Chemical analyzers for systemizing, increasing efficiency in laboratory work; other sophisticated laboratory instruments. Wilhelm Vogel (importer, dist., agent), Marburger Str. 81—P.O. Box 119, 6300 Giessen. WTD 2/71.

38112 — VENEZUELA — Physiological equipment suitable for live animal laboratory experiments, including multi-channel data recorder, amplification systems. Kobe Representaciones Cientificas C.A. (importer), Horst Poerner, Apartado 6887, Edificio Karam, 3°Piso, Avda Urdaneta, Caracas. WTD in prep.

Instruments for measuring, controlling, indicating physical characteristics

38213—GERMANY — Automatic electronic temperature control devices, temperature recorders, indicators for heavy industry; flue gas testing meters; densimeters, calorimeters. Direct purchase & agency. Schwendler & Co. K. G. (importer, dist., mfr.), Am Bahnhof 4, 6605 Friedrichsthal. WTD 2/71.

38213—NETHERLANDS — Mechanical process control equipment for chemical, petro-chemical industries. Exclusive rep. requested. N.V. Fabriek en Handelsbureau "Nederland", Attn: G. Schuit (importer, dist., mfr.), 22 Donkere Spaarne, Haarlem. WTD 2/71.

Surgical, medical, dental instruments

38410—ITALY—Surgical, medical instruments, apparatus. Invernizzi Ernesto S.p.A. (importer, dist., agent), Via di San Giacomo 5, 00187 Rome. WTD 1/71.

38420—ITALY — Surgical suture appliances, supplies. Invernizzi Ernesto S.p.A. (importer, dist., agent), Via di San Giacomo 5, 00187 Rome. WTD 1/71.

38423—AUSTRIA—Safety goggles for welders, dust and gas masks for personal safety in industry. A. Schmied K.G. (importer, dist., mfr., exporter), Ellbognerstr. 24, P.O. Box 538, A-4021 Linz/D. WTD 2/71.

Photographic equipment

● **38600—GUINEA** — Two international bids are invited by the Radiodiffusion Television, Algerienne for the supply and installation of equipment for post-synchronization and projection of films, bid deadline Mar. 31; and the supply and installation of development equipment, bid deadline Apr. 30. Terms and specifications available from Algerian Interests Section, 2118 Kalorama Rd., NW., Washington, D.C. 20008 (202-234-7246).

38610 — MAURITIUS — Cinema equipment. Rubina Atchia (importer, manufacturer's rep.), Cinema des Familles, 61 Mere Barthelemy St., Port Louis. WTD in prep.

Jewelry, silverware, plated ware

39141—NETHERLANDS — Table holloware: stainless steel or silver-plated alpacca. Exclusive sales rep. N.V. Solafabriek—M.J. Gerritsen, Attn: M. Grisel, Export Mgr. (importer, dist., mfr.), 155-157 van Reeneweg, Zeist. WTD 2/71.

39142—NETHERLANDS — Table flatware, cutlery of stainless steel or heavily silverplated alpacca. Exclusive sales rep. N.V. Solafabriek—M.J. Gerritsen, Attn: M. Grisel, Export Mgr. (importer, dist., mfr.), 155-157 van Reenenweg, Zeist. WTD 2/71.

Toys, amusement, sporting goods

39410—MAURITIUS—Toys. M. E. Timol & Co. (importer, agent), 15, Royal St., Port Louis. WTD in prep.

39493—ITALY — Fiberglass, epoxyglass skis. Ettore Fautrero S.a.s. (importer, dist.), Corso Novara 102, Turin 10152. WTD 2/71.

Pens, pencils, office, artists' materials

39510 — MAURITIUS — Fountain pens. M. E. Timol & Co. (importer, agent), 15, Royal St., Port Louis. WTD in prep.

Novelties, buttons, notions

39641—CANADA—Zippers, slide fasteners; nylon, metal, invisible. Estimated annual quantity: one to two million. A & A Fabrics, Twilight Investments Ltd. (dist.), 110 Spadina Ave., Toronto 2B, Ontario. WTD in prep.

39642—CANADA—Needles, pins, fasteners (except slide), similar notions. A & A Fabrics, Twilight Investments Ltd. (dist.), 110 Spadina Ave., Toronto 2B, Ontario. WTD in prep.

Motion picture production, distribution

78130 — MAURITIUS — Commercial, English-language films. Rubina Atchia, Cinema des Familles (importer, manufacturer's rep.), 61 Mere Barthelemy St., Port Louis. WTD in prep.

Other Foreign Official Tenders

CHILE—Instituto Nacional de Capacitacion Profesional (INACAP) issued two tenders for Mobile Training Units: one for agricultural and one for fishery vocational training. IBRD financing. Bid deadline Apr. 30. The Agricultural Training Tender of 159 line items includes: agricultural type machinery; completely equipped mobile shops; 2.5 ton trucks; house trailers for two persons; mobile classrooms (audiovisual units), and over 100 line items of woodsmen's equipment; protective equipment; irrigation equipment; veterinary instruments and equipment, etc. The Fishery Program of 152 line items includes: 1 jeep; 2 vans; 4 trucks; 1 vessel (steel hull to accommodate 14 people); marine diesel engines; an auxiliary unit, and all of the necessary items to equip the above vessel. Specifications may be obtained for $3.50 each from Corporacion de Foments de la Produccion, 80 Pine St., New York, N.Y. 10005 (212-344-9800). Send bids to INACAP, Santiago.

GREECE—The Hellenic Telecommunications Org. issued Tender No. 6826 for the supply of teleprinters. Bid deadline Mar. 22. Bid should offer 3,400 three shift single current page teleprinters, 400 three shift single/double current page teleprinters, 400 teleprinter converters. Copies of tender announcement and specifications available from the Sub-Directorate of Tenders (OTE), 6 Klissovis St., Rm. 24, Athens, or on a short-term loan to firms located in the U.S. from the Communications-Electronics Div., BDC-643, Rm. 4209, Dept. of Commerce, Washington, D.C. 20230 ★ (202-967-4823).

GREECE—The Ministry of Public Works invites prequalifications to tender for the supply of equipment and construction of a sprinkler irrigation network on a 20,000-acre area traversed by the Pinios River in the western tip of Peloponnesus. This project is estimated at $10.3 million and is partly financed by the European Investment Bank. Bidding is open to firms from the U.S., the European Economic Community, Switzerland and Greece. Applications must be submitted to the Ministry of Public Works, Hydraulic Works Service, D4, 7 Themistocleous St., Athens 141, by Mar. 29. Construction & Engineering Div., BDC-675, Dept. of Commerce, Washington, D.C. 20230, has two copies of the prequalification documents for short term loans; a third copy may be reviewed in Room 5877.

HONG KONG—The Hong Kong Telephone Co. issued Tender No. E4599/E4/2/RG/I-1b for the supply of microwave radio relay and multiplex equipment. Bid deadline Apr. 28. Copies of tender announcement and specifications available from the Hong Kong Telephone Co. Ltd., Prince's Bldg., P.O. Box 479, Hong Kong or on a short-term loan to firms in the U.S. from the Communications-Electronics Div., BDC-643, Rm. 4209, Department of Comerce, Washington, D.C. 20230 ★ (202-967-4823).

HONG KONG—The Hong Kong Telephone Co. issued Tender No. E84/E4/2/RG/I.1c for the supply of low capacity radio relay systems and multiplex equipment. Bid deadline is Apr. 28. The bid calls for equipment in the 800-960Mhz or 1700-2300Mhz band, with frequency division or time division multiplex. Copies of the tender documents and specifications are available from the Hong Kong Telephone Co. Ltd., Prince's Bldg., P.O. Box 479, Hong Kong, or on a short term loan to firms located in the U.S. from the Communications-Electronics Div., BDC-643, Rm. 4209, Dept. of Commerce, Washington, D.C. 20230 ★ (202-967-4823).

INDONESIA—The Indonesian Government agency PROSIDA seeks the services of three engineers expert in the fields of operation and maintenance, construction and contract, and finance and administration to act as advisors and assist in the rehabilitation of seven irrigation systems. The initial employment will be for two years under direct contract with PROSIDA, beginning as soon as possible, but not later than April 1971. The team will be located in Djakarta and will travel as necessary to the project sites. Write the Construction & Engineering Div., BDC, Dept. of Commerce, Washington, D.C. 20230 (202-967-4346). Details regarding the program and the required advisory services will be furnished on request from: General Project Manager, PROSIDA, c/o Directorate General of Water Resources Development, Djl. Pattimura No. 20, Perc. 7, Kebajoran Baru, Djakarta.

KOREA—The Office of Supply, Government of the Republic of Korea, issued a tender for large quantities of equipment to be financed by the Asian Development Bank. Tender No. ADB/L-71006-PII; bids due by 2 p.m., Apr. 30, for the following: 170 cargo trucks; 66 truck tractors; 76 flat bed and low bed type trailers (semi, 2-axles); 50 12-ton dump trucks; 22 cranes, truck-mounted; 21 fork lift trucks; four bucket loader, wheel type, and 107 items for workshop machines. Specifications available from the above address or from the Korean Consulate General, 9 E. 80th St., New York, N.Y. 10021 (212-879-8899).

LEBANON—The Societe De Developpement Des Telecommunications Du Liban (Sodetel) issued a tender for establishing a telecommunications system between Alexandria-Beirut and Damascus. Bid deadline Mar. 29, 12 noon. Bid should offer: submarine cable between Alexandria and Beirut having a capacity of 120 voice circuits, specifications call for cable type KS-773; 960 voice circuit system between Beirut and Damascus consisting of buried coaxial cable and microwave relay system. Estimated cost project is 20 million Lebanese pounds. Copies of tender announcement and specifications are available from Sodetel, Immeuble Fakhri Et Dagher, Boulevard De La Cite Sportive, Beirut, for 2,000 Lebanese pounds. Firms bidding on the project must present evidence of having completed similar projects.

MOZAMBIQUE—The Mozambique Dept. of Posts, Telegraph and Telephones issued a tender for telecommunications equipment. Bid deadline is 10 a.m., Apr. 20. Bid should offer survey, supply and installation of telecommunication equipment (troposcatter and wire) for expanding the existing telecommunication system from Lourenco Marques to Beira, Quelimane, Nampula and Tete, as well as for completing the system from Monte Xiluvo to Songo Via Monte Xiluvo-Quelimane-Nampula and Caroeria/Tete now under construction. Copies of tender announcement and specifications available from the Mozambique Dept. of Post, Telegraph and Telephone, 4th Bureau, Technical Services, Lourenco Marques, for $17.55 plus mailing charges.

SINGAPORE—The Jurong Town Corp. invites contractors from Asian Development Bank member countries to apply for prequalifications to bid for a project involving dredging, land reclamation, bank stabilization, construction of over 2,800 feet of deep-water wharf, warehouses and other supporting facilities, ancillary works, etc., behind wharves. The tender call is scheduled for April 1971. Applicants should submit prequalification forms (some are available from the Dept. of Commerce, BDC-645, Washington, D.C. 20230, stating name of firm, past experience, names and experience of management, financial resources and other data relevant to assessment. Forms are available from the Director, Development Div., Jurong Town Corp., Block 106 Corp. Rd., Jurong Town, Singapore 22. Applications must be accompanied with U.S.$330 deposit which is returnable if the registration is rejected or a bona fide tender received. Tender documents will only be issued to contractors registered with the Jurong Town Corp. Applications should be addressed to the Chairman, Jurong Town Corporation at the above address. Deadline is 12 noon, Apr. 9.

THAILAND—The Dept. of Vocational Education, Ministry of Education, Bangkok, issued "Invitation to Bid No. LIVE-22" for supply of miscellaneous "G" equipment, part of a $6 million IBRD loan for improving vocational education in Thailand. Bid deadline is 1 p.m., Mar. 30. The specification consists of the following: delivery vans; animal husbandry equipment; plant science equipment; farm mechanics equipment; condensing unit; rheostats; meters; advanced industrial control systems, power transformer and electricity/electronics kits; expansion valves; electronic stroboscopes; video tape recorders; demonstration kits for UHF, antenna, and microwave instruction; integrated design and test systems; cameras to be used with video tape recorders; T.V. monitors; sine-square wave generators; D.C. power supply; RLC bridge; AC clamp-on meters; universal pulse generator; movie equipment; super-8 mm. motion picture editor; time card stampers, shop vacuum cleaners. Specifications may be obtained from the above address or may be reviewed at Trade Opportunities Staff, BDC-541, Rm. 1104, Dept. of Commerce, Washington, D.C. 20230 (202-967-4674). A review copy is available at the Commerce Field Office, 11444 Federal Bldg., 450 Golden Gate Ave., San Francisco, Calif. 94102 (415-556-5868).

VENEZUELA—The Venezuelan Ministry of Public Works has opened a bidding procedure (prequalification of bidders) for the construction of two sections of the "Cota Mil" speedway in Caracas. The two bids are numbered L-71-V-1 and L-71-V-2. Details of the works include: 1) L-71-V-1: construction, pavement and structures of the Avenida Boyaca (Cota Mil), connection with Avenida Francisco de Fajardo: excavation, 285,000 cubic meters; construction of fills, 355,000 cubic meters; concrete for drainage, 1,250 cubic meters; concrete for walls, 11,500 cubic meters; metal drains, 300 linear meters. 2) L-71-V-2: same project, second phase: excavation 1,013,450 cubic meters; construction of fills, 571,290 cubic meters; concrete for drainage, 2,361 cubic meters; concrete for walls, 13,250 cubic meters; metal drains, 2,250 linear meters; tubing for superficial drainage, 8,270 linear meters; concrete curbs, 35,120 linear meters; concrete drainage ditches, 8,220 linear meters; base of soil-cement, 29,428 cubic meters; concrete structures (bridges), 32,884 square meter; asphalt-concrete mixture, 58,854 cubic meters; and safety rails, 9,500 linear meters. U.S. construction firms should provide documents in accordance with a list of instructions available at the Dept. of Commerce, BDC-645, Washington, D.C. 20230 (202-967-3602). Send documents to: Library of the Ministry, Edificio Camejo, Esquira de Camejo, Caracas, by May 14.

Future Construction Abroad

ARGENTINA—Buenos Aires has conducted a feasibility study for the installation of an **electronic traffic control system** regulated by a digital computer. This system, because of its technical characteristics and magnitude, would be the second largest in the world, after that of New York. The project will be carried out in two phases, covering two areas of the city: Phase 1: In this area there are currently 181 intersections with traffic signals, 124 new intersections will be placed under the computer's control when the system is put into operation. Phase 2: Installation of signals at 109 new intersections. On completion of this phase, 509 intersections would be under the computer's control. A call for tenders for Phase 1 will be issued about July. Contact Direccion General de Transito y Obras Viales, Municipalidad de la Ciudad de Buenos Aires, Carlos Pellegrini 291, 9° Piso, Buenos Aires.

ARGENTINA — Aerolineas Argentinas, Government-owned air carrier, plans to call for tenders for a **third generation data processing system**. It will be used to automate passenger reservations, internal communications and possibly cargo handling. The company is now using an IBM 1401. At present a group of Aerolineas technicians are drawing up specs. It was decided to lease rather than buy because Aerolineas did not believe it could amortize the purchase before the system would be obsolete. The bidding deadline will probably be short. Interested American suppliers should contact: Alberto Fandino, Jefe del Departamento Contrataciones, Aerolineas Argentinas, Paseo Colon 185, Oficina 103, Buenos Aires.

ARGENTINA—The Argentine Ministry of Public Works & Services signed a contract with Techint Compania Tecnica Internacional S.A. and Horacio O. Albano Construcciones S.A. for the **construction of the bridge portions of the Zarate-Brazo Largo road bridge complex**. The contract calls for two bridges of mixed steel-concrete construction valued at $75 million, and approach works. The facility will carry both a road and a standard guage rail track. The award was for over $89.5 million and specifies completion within 36 months. Because of the size of this project, substantial sales opportunities should develop for construction equipment. Contact Techint, Cordoba 320—8° Piso, Buenos Aires, and Horacio O. Albano Construcciones S.A., Viamonte 773, Buenos Aires. Albano Construcciones will do the actual structural work on the bridges.

CANADA—Three construction projects in British Columbia are planned in the near future. **Construction of the third office tower** of the Bentall Centre in Vancouver will consist of 30 stories and contain 440,000 sq. ft. of office space. It will begin in late spring or early summer. The completion is scheduled for April 1973. A fourth tower is currently the subject of a feasibility study by B. C. Telephone. Submit bids on sub-contracts to the Dominion Construction Co., Ltd., Attn: Mr. Bestwick, General Contractors, No. 1 Bentall Centre, Vancouver. **An $8 million building complex,** consisting of two apartment blocks, 27 and 24 stories, respectively, comprising 384 apartments, and a 5-story office building, will be constructed in Burnaby sometime this summer. The project, to be called Burnaby Centre, is being financed by the North American Life Assurance Company of Vancouver. The complex is situated on top of a commercial base of 30,000 sq. ft. and will have four levels of parking space. The plaza joining the residential towers to the office complex, includes walks, benches, landscaping and lighting, recreation and play areas, and a glass-enclosed, self-contained swimming pool. Submit bids on sub-contracts for the supplies and equipment required for buildings to: Milton Narod, Secretary, Narod Construction Co., Ltd., 1672 W. 2nd, Vancouver. With the completion in January 1971 of a $1 million, 30,000 sq. ft. shopping mall in Fernie, Lucaya Development Corp., Ltd., Vancouver, announced plans for a 15,000 sq. ft. **extension to the shopping mall,** a $300,000 **two-story office building** to be constructed near the mall, and plans for a $450,000 **Swiss chalet-style motel** which will be located on the main highway entering Fernie. The motel will have a coffee shop, lounge and related facilities. Lucaya Development is handling all design, construction and leasing of the projects. Construction is expected to begin on the mall extension in April. Write to Lucaya Development Corp. Ltd., Mr. Lipp, Pres., 510 W. Hastings St., Vancouver.

FRANCE—The French **petroleum refinery capacity** is expected to increase over the next four years. Currently there are two projects for new refineries as the major part of capacity increases will come through expansion. Compagnie Francaise de Raffinage (Total), plans to build a refinery near Lyon, which is expected to be complete in 1974. The French companies, Total and Elf along with Petrofina are reported to be studying the possibility of putting a refinery at Brest. Refinery expansion plans include: a) Dunkirk: British Petroleum may raise the capacity of its Dunkirk refinery from 5.5 to 10 mt/yr. and build a steam-cracking facility. b) Valenciennes: Antar may expand its Valenciennes refinery. c) Vexin: Elf may raise the capacity of its refinery from 3.6 to 5.6 mt/yr. d) Gonfreville: Total is planning to increase the capacity of its refinery from 14.3 to 22 mt/yr. e) Petit-Couronne: Shell may raise the capacity of its refinery from 9.2 to 18 mt/yr. f) Nangis: Elf intends to double the present 3.8 mt/yr. capacity of its refinery to the East of Paris. g) Donges: Construction is underway at Antar's refinery to raise its capacity from 4.5 to 8 mt/yr. h) Feyzin (Lyon): The Elf refinery is expected to add 3 mt/yr. to its present 6 mt/yr. capacity and then expand to 12 mt/yr. There will also be a second steam-cracking facility. i) Fos: Esso is expected to add 5 mt/yr. to present 3 mt-yr. capability of its refinery. j) Lavera: British Petroleum is increasing the capacity of its Lavera refinery from 4.4 to 11 mt/yr. Construction is expected to be completed by next spring. k) Berre: Shell may add 6 mt/yr to the current 7 mt/yr. capacity of its refinery and build a steam-cracking facility.

FRANCE—Construction of the Air France/Loews **600 room hotel project and commercial center** in the 7th Arrondissement of Paris is being planned; it should get under way in late 1971 or early 1972.

FRANCE—**A commercial and design center** is being planned in conjunction with a new **650 room hotel** in the area of Neuilly-sur-Seine. The project is scheduled to start in mid-1971. Contact CO-GREPO, 86 Avenue de Breteuil, Paris 8.

GERMANY—Bremen has started constructing a **new university** which upon completion by 1980 will accommodate about 8,000 students. It will include the following faculties: modern languages, social sciences (law, economics, sociology, history), mathematics, physics, electrical engineering, biology, chemistry and physical education. The project calls for a total investment of about DM 700 million during the next ten years. Approx. DM 80 million will be spent on land acquisition and development, about DM 400 million for the natural sciences department of the university, and the remainder for liberal arts. Contact the International Liaison & Trade Opportunities Staff, BDC-541, Dept. of Commerce, Washington, D.C. 20230.

GERMANY—The German Government may **subsidize and promote the application and production of electronic data processing (EDP) equipment** in Germany from 1971 through 1975. According to a report, Germany plans to spend a total of DM 4.18 billion on the program. This amount will include the purchase of EDP equipment, the installation of computer centers, training in the application of EDP equipment, and subsidies to German computer manufacturers. For an earlier program which covered the period of 1952 through 1970, a total of DM 680 million was spent by the Deutsche Forschungsgemeinschaft, and the German Ministries for Science, Economics and Labor. The emphasis in the second program on EDP will be on training and applications. Funds may be used as follows: DM 2.51 billion for training programs and universities including DM 1.7 billion to acquire new computers for universities. DM 600 million for application (demonstration projects and application programs). DM 820 million as subsidies to industry. DM 250 million for special scientific programs.

ITALY—A number of **industrial expansions in Sicily** are being considered by the Comitato Interministeriale per la Programmazione Economica. The new initiatives include: 1) An electro-metallurgical and chemical facility to produce chlorine, sodium carbonate, magnesium, and phosphorous as well as 150,000 tons of aluminum annually. In connection with this major facility a water-desalting plant would be constructed. Investment would be about 400 billion lire; 7,000 new jobs would be created. 2) Expansion of IRI's existing electronics plants (ELTEL in Palermo and ATES in Catania), and establishment of a new plant for production of electronic telephone equipment in Carini (Palermo). 3) Possible creation of an additional electronic initiative in Sicily. 4) Construction of a tourist village at a cost of some 2 billion lire. **Private investors are considering pharmaceutical, plastics, and other industrial projects for both Sicily and Calabria.**

KOREA—The Korea Institute of Science and Technology has recently released the English version of a study of the Republic of Korea's mechanical engineering industry. The study was prepared in conjunction with the Battelle Memorial Institute and was commissioned by the Economic Planning Board. The recommendations call for the **creation of several new plants** which would form the nucleus for a mechanical engineering industry in Korea. A summary of this study prepared by the American Embassy in Seoul can be obtained from the Dept. of Commerce, International Liaison & Trade Opportunities, BDC-541, Washington, D.C. 20230.

NICARAGUA—The following list of projects, which may offer opportunities for U.S. businessmen, has been announced. Nicaragua has just signed a loan agreement with the Inter-American Development Bank to finance a **new sewage system and treatment plant** for Managua and the construction of 3800 **low-cost housing units.** The Central American Development Bank has signed a loan agreement with Nicaragua to improve the **dock facilities** at El Bluff on Nicaragua's Atlantic Coast and Rama on the Escondido River. The loan will also finance the purchase of **barge equipment.** IDB has loaned both INFONAC and the Banco Nacional funds for the **improvement of beef and dairy cattle herds and pasturage.** INFONAC also has IDB funds for financing the **purchase of hogs and hog farm equipment.** The Nicaraguan Government will apply to the IDB for a loan to finance the **construction of sewage and potable water systems in ten cities.** A contract may be signed in 1971 for the second stage of a **geothermal project** which is determining whether Nicaragua's sub-surface volcanic heat sources can be tapped for production of electricity. The second stage will call for deep drilling to about seven thousand feet.

PHILIPPINES — Republic Flour Mills, Reynolds International (Philippines), Hooven (Philippines), and the Private Development Corp. of the Philippines (PDCP) are expected to form a consortium to construct the Philippines first **aluminum smelter.** Annual plant production capacity will be 30,000 metric tons of aluminum ingots. Completion is planned for late 1973 at a cost of about $35 million. Machinery and equipment imports will cost over $13 million.

PHILIPPINES—Pentagon Mines, Inc. is **developing copper and nickel properties** in Iligan City (in Mindanao), Philippines. On the basis of initial geological findings on these properties, the firm plans to put up a copper concentration plant which is expected to cost p2-5 billion. The development of the firm's mining properties in Camarines Norte and Guimaras Island, Iloilo, is expected to follow. If geological findings warrant, another copper concentration plant will be established in Camarines Norte. Other mining properties in the area are reportedly being viewed by the firm for acquisition and development. Write: Pentagon Mines, Inc., 6th Floor, RMC Bldg., Roxas Blvd., Manila. Attn: Wenceslao Vinzons, Jr.

THAILAND—The Thai Council of Ministers has reportedly approved a proposal to build a fifth **bridge across the Chao Phya River** to link Bangkok and Thonburi. Public and Municipal Works Dept. engineers are now preparing the designs which will be a "lift type" structure and is estimated to cost from $8 to $10 million. An international tender for the construction of the bridge is scheduled to be called by the middle of

1971 after the necessary budget is appropriated. Write: Damrong Cholvijarn, Director-General, Public & Municipal Works Dept., Pan Fah Bridge, Larn Luang Road, Bangkok.

VENEZUELA — The following details and construction schedules have been released by Centro Simon Bolivar regarding **reconstruction of the center of Caracas.** (See International Commerce, May 25, 1970.) The construction of three 40-story apartment houses has begun. The complex will contain 1,200 apartments, a supermarket, a shopping center, a movie theater and a church; total cost for this project is Bs. 600 million. Architects have been invited to participate in a design contest for a **concert hall** with a seating capacity of 2,700 persons and containing the offices and rehearsal rooms for the Venezuelan Symphony Orchestra. Construction of a 30-floor Palace of Justice is to begin soon; it will cost Bs. 40 million and will contain the Ministry of Justice as well as several courts. A plan for re-designing an area of downtown Caracas has been approved. Over 4,000 housing units will be built and a large park is to be constructed. U.S. companies interested in offering supplies, appliances and equipment for these various projects should contact: Centro Simon Bolivar C.A., Torre Norte —Centro Simon Bolivar, Caracas.

VENEZUELA—CADAFE, the Government-owned utility, intends to invite consulting companies to make proposals for a study of the planned Uribante-Caparo **hydro-electric power plants.** Both of these rivers are located on the western side of the Venezuelan Andes. The Uribante plant is to have an installed capacity of 500,000 KW, to be generated by four turbine-generators of 125,000 KW each. The reservoir is to have a capacity of 525 million cubic meters of water with a drop of 520 meters from reservoir into the turbines. The Caparo plant, to be built as second phase of the total project, is to have an installed capacity of 200,000 KW with two generating units of 100,000 KW each. The reservoir will have a capacity of 3,280 million cubic meters of water, with a drop of 80 meters from water level into the turbines. Part of the power generated will be exported to Colombia. Interested companies should contact: C.A. de Administracion y Fomento Electrico (CADAFE), Oficina Desarrollo Hidroelectrico de Los Andes, Edificio Fundacion La Salle, Avenida Boyaca (Cota Mil), Caracas.

New Trade Lists

The Bureau of International Commerce has published the following Trade Lists. Copies may be obtained by firms domiciled in the United States from BIC-924, Department of Commerce, Washington, D.C. 20230, and from Commerce Field Offices. The price is $1 per list for each country.

The following automated lists provide complete coverage for Argentina, Canada, Japan and Spain. They may be ordered by title or identification number.

Argentina

No. *Title*

01000—Farm, forestry, fishery products; mining companies
20000—Food, kindred products; tobacco, tobacco products
22000—Textile industry
23000—Apparel, accessories; miscellaneous fabricated textile products; personal leather products
24000—Lumber, wood products; furniture, fixtures
26000—Pulp, paper, paperboard mill products; converted paper, paperboard products; building paper, boards; printing, publishing industries
28100—Industrial chemicals
28200—Plastics materials, synthetics; plastic products
28300—Drugs, soap, cleaners, toilet goods
28500—Paints, allied products; gum, wood chemicals
28700—Agricultural chemicals; miscellaneous chemical products
29000—Petroleum, petroleum products
30000—Rubber, rubber products; leather, leather products (except footwear, personal leather goods, tires, inner tubes)
32000—Stone, clay, glass products
33000—Primary metal products, ferrous, nonferrous
34000—Fabricated metal products
35100—Engines, turbines
35200—Farm machinery, equipment; construction, mining, materials handling machinery, equipment
35400—Machine tools; special dies, tools, jigs, fixtures, industrial molds; machine tool accessories; other metalworking machinery.
35500—Food products machinery; miscellaneous special industrial machinery, nonelectrical
35520—Textile industry machinery; woodworking, paper, printing industries machinery
35600—General industrial machinery, equipment, nonelectrical
35700—Office, computing, accounting and service industry machinery; miscellaneous nonelectrical machinery
36000—Electrical machinery, equipment, supplies
37000—Transportation equipment, parts, accessories (including tires, inner tubes)
38000—Professional scientific instruments, controlling devices; photographic equipment, supplies; watches, clocks; jewelry, silverware, plated ware
39000—Musical instruments; toys, amusements, sporting, athletic goods; office, artists' materials; costume jewelry; novelties, notions; miscellaneous manufactured products

Canada

No. *Title*

1—Air conditioning, refrigeration
2—Apparel, accessories; personal leather goods (except footwear)
3—Automotive vehicles, parts, accessories
4—Chemicals, industrial, agricultural; plastics materials, synthetics
5—Commercial machines, equipment
6—Communication equipment; electronic components, accessories
7—Construction, mining machinery, equipment
8—Drugs, drug proprietaries, druggists' sundries
9—Electrical apparatus, equipment; wiring supplies, electrical construction materials
10—Farm, forestry, fishery products
11—Farm machinery, equipment
12—Food, kindred products
13—Footwear
14—Furniture, home furnishings
15—Hardware
16—Household appliances; electronic equipment for home entertainment; phonograph records, tapes
17—Industrial machinery, equipment
18—Industrial supplies
19—Lumber, wood products; nonelectrical construction materials
20—Musical instruments; toys, amusements, sporting, athletic goods
21—Paints, allied products; gum, wood chemicals
22—Paper, stationery supplies
23—Petroleum, petroleum products
24—Plumbing, heating equipment, supplies
25—Primary metals, minerals; mining companies
26—Professional equipment, supplies; photographic equipment, supplies
27—Scrap, waste materials (wholesalers/dealers only listed as one group)
28—Service establishment equipment, supplies
29—Textile goods, notions
30—Tobacco, tobacco products
31—Transportation equipment, supplies (except automotive)

Japan

No. *Title*

01000—Farm, forestry, fishery products; mining companies
20000—Food, kindred products; tobacco, tobacco products
22000—Textile industry
23000—Apparel, accessories; miscellaneous fabricated textile products
24000—Lumber, wood products
25000—Furniture, fixtures
26000—Pulp, paper, paperboard mill products; converted paper, paperboard products; building paper, boards
27000—Printing, publishing industries
28100—Industrial chemicals
28200—Plastics materials, synthetics
28300—Drugs
28400—Soap, cleaners, toilet goods
28500—Paints, allied products; gum, wood chemicals
28700—Agricultural chemicals; miscellaneous chemical products
29000—Petroleum, petroleum products
30000—Rubber, rubber products; leather, leather products
30700—Plastic products
32000—Stone, clay, glass products
33000—Primary metals, metal products, ferrous, nonferrous
34100—Metal cans; cutlery, hand tools, general hardware

34300—Heating apparatus (except electric), plumbing fixtures
34400—Fabricated structural metal products; industrial fasteners; metal stampings; miscellaneous fabricated metal products
35100—Engines, turbines
35200—Farm machinery, equipment
35300—Construction, mining, materials handling machinery, equipment
35400—Machine tools; special dies, tools, jigs, fixtures, industrial molds; machine tool accessories; other metalworking machinery
35500—Food products machinery; miscellaneous special industrial machinery, nonelectrical
35520—Textile industry machinery; woodworking, paper, printing industries machinery
35600—General industrial machinery, equipment, nonelectrical
35700—Office, computing, accounting machines
35800—Service industry machinery, miscellaneous nonelectrical machinery
36100—Electrical test, distributing equipment; electrical industrial apparatus (includes motors, generators, industrial controls, welding equipment, carbon, graphite products, capacitors, rectifying apparatus, etc.)
36300—Household appliances; electronic equipment for home entertainment; phonograph records, tapes
36400—Electric lighting, wiring equipment
36600—Commercial, industrial, military communication equipment
36700—Electronic components, accessories
36900—Miscellaneous electrical equipment, supplies
37100—Auto vehicles, parts, accessories (includes auto repair shops)
37200—Transportation equipment, parts (except automotive)
38100—Professional, scientific instruments, controlling devices
38600—Photographic equipment, supplies; watches, clocks; jewelry, silverware, plated ware
39300—Musical instruments; toys, amusements; sporting, athletic goods
39500—Pens, pencils, other office, artists' materials; costume jewelry; novelties, notions; miscellaneous manufactured products

Spain

No. *Title*

01000—Farm, forestry, fishery products; mining companies
20000—Food, kindred products; tobacco, tobacco products
22000—Textile industry
23000—Apparel, accessories; miscellaneous fabricated textile products, personal leather products
24000—Lumber, wood products
25000—Furniture, fixtures
26000—Pulp, paper, paperboard mill products; converted paper, paperboard products; building paper, boards
27000—Printing, publishing industries
28000—Industrial chemicals
28200—Plastics materials, synthetics; plastic products
28300—Drugs
28400—Soap, cleaners, toilet goods
28500—Paints, allied products; gum, wood chemicals
28700—Agricultural chemicals; miscellaneous chemical products
29000—Petroleum, petroleum products
30000—Rubber, rubber products; leather, leather products
32000—Stone, clay, glass products
33000—Primary metals, metal products, ferrous, nonferrous
34100—Metal cans; cutlery, hand tools, general hardware
34300—Heating apparatus (except electric), plumbing fixtures
34400—Fabricated structural metal products; industrial fasteners; metal stampings; miscellaneous fabricated metal products
35100—Engines, turbines
35200—Farm machinery, equipment
35300—Construction, mining, materials handling machinery, equipment
35400—Machine tools; special dies, tools, jigs, fixtures, industrial molds; machine tool accessories; other metalworking machinery
35500—Food products machinery; miscellaneous special industrial machinery, nonelectrical
35520—Textile industry machinery; woodworking, paper, printing industries machinery
35600—General industrial machinery, equipment, nonelectrical
35700—Office, computing, accounting machines
35800—Service industry machinery, other nonelectrical machinery
36100—Electrical test, distributing equipment; electrical industrial apparatus (includes motors, generators, industrial controls, welding equipment, carbon, graphite products, capacitors, rectifying apparatus, etc.)
36300—Household appliances; electronic equipment for home entertainment; phonograph records, tapes
36400—Electric lighting, wiring equipment
36600—Commercial, industrial, military communication equipment
36700—Electronic components, accessories
36900—Miscellaneous electrical equipment, supplies
37100—Auto vehicles, parts, accessories (includes auto repair shops)
37200—Transportation equipment, parts (except automotive)
38100—Professional, scientific instruments, controlling devices
38600—Photographic equipment, supplies; watches, clocks; jewelry, silverware, plated ware
39300—Musical instruments; toys, amusements, sporting, athletic goods
39500—Pens, pencils, other office, artists' materials; costume jewelry; novelties, notions; miscellaneous manufactured products

Automated Business Firms

No. *Title*

00000—British Honduras
Business Firms—December 1970
00000—Ceylon
Business Firms—December 1970
00000—Cyprus
Business Firms—January 1971
00000—Dem. Republic of the Congo
Business Firms—December 1970
00000—Ethiopia
Business Firms—January 1971
00000—Guyana
Business Firms—January 1971
00000—Haiti
Business Firms—January 1971

Firms, Subsidiaries, Affiliates

American Firms, Subsidiaries and Affiliates—Greece, January 1971

Visiting Buyers And Officials

FRANCE—Jacques Olivier, Manager, Techmay, S.A., 21 rue de la Liberte, 12 Millau, **interested in agencies from U.S. manufacturers of pressure sensitive labels and automatic labeling machinery and in discussing possible joint ventures and licensing of new processes used either in U.S. or Europe.** Feb. 21 via Houston for 2-3 weeks. c/o French Trade Commissioner, Americana Bldg. Room 603, Houston, Tex. 77002. Itinerary: New York, Houston, Philadelphia, Boston, Chicago. WTD 10/70.

ISRAEL—Daniel Noy, Head of Industrial Dept. of Hakibbutz Hameuchad, and Member of Management of Kibbutz Industries Assoc., 27 Sutin St., Tel Aviv, **interested in licensing joint venture, other agreements where their members can use their productive capacity; under consideration are production of electronic equipment and components, expanded polystyrene products for building industry, items produced on automated machine tools but other manufacturers will be considered.** Mar. 1 via N.Y. for 30 days. c/o Kibbutz Industries, 22 E. 40th St., New York, 10016. Itinerary: Washington, Boston, New York, Bradford, St. Louis and Philadelphia. WTD in prep.

SINGAPORE—Pritamial Jesukhlal Doshi Vipin Co., 22-A Robinson Rd. (P.O. Box 2567), Singapore 1, **interested in importing carpet** (stock lots: wall to wall, 10,000 sq. yards), **wallpapers, furnishing material, household linens, imitation leather cloths and bedspreads.** March 1 via Los Angeles for two weeks. c/o Victor Hicks, One America Inc., 425 Bush St., San Francisco, Calif. 94108. Itinerary: San Francisco, Los Angeles, New York, Atlanta. WTD 2/70.

SPAIN—Miguel Augustin Torres Riera, Miguel Torres, Comercio 20, Villafranca del Panades, Barcelona, **interested in exporting Spanish bottled wines to the U.S.** Feb. 17 via Miami for two months. c/o Arnold Leavitt, 3247 S. Kedzie Ave., Chicago, Ill. 60648. Itinerary: Miami, New Orleans, Los Angeles, San Diego, San Francisco, Seattle, Chicago, Washington D.C., Harrisburg. WTD 5/68.

VIETNAM—Tran Kim Quang, International Pacific Agency (INTERPAC), manufacturers, **interested in acquiring Vietnamese agency for various lines of chemicals, tractors, water pumps, electric motors and others.** Feb. 13 via San Francisco for one month. c/o Vietnam Consulate, 866 United Nations Plaza, Suite 547-549 New York, N.Y. 10017. Itinerary: San Francisco, Chicago, Appleton, Wis., Cincinnati, Pennsylvania, New York, Oregon.

International Business Reports

The World Business Letter. **Biweekly. $48 per year.**

This service includes: a biweekly four-page newsletter; periodic supplements; and coverage of subjects of special interest to subscribers.

Some of the subjects covered by the newsletter include export finance, export controls, import politics, import administration, import adjustment, foreign investment, development assistance, military exports, international banking, and country coverage. The latter includes analysis of political trends, balance of payments and trade prospects, and government activities affecting trade and investment.

Write: Richard L. Barovick, The World Business Letter, 3275 Arcadia Place, NW., Washington, D.C. 20015.

Air Conditioning and Refrigeration Equipment: North Africa. **Prepared by BIC, U.S. Dept. of Commerce, Washington. Free.**

A Special Report on the marketing of air conditioning and refrigeration equipment in the North African countries of Algeria, Libya, Morocco, and Tunisia is now available to U.S. businessmen. This report was prepared in the Bureau of International Commerce.

Included in the report is a general statement of the market size and area, currency stability, and U.S. market penetration. The customs duties for this equipment in all four countries, the basis on which duties are assessed, and preferential duty rates, where applicable, are given. In addition, taxes other than the customs duties which are applied to imports are specified.

Exchange controls, quotas, bilateral agreements affecting these goods, documentation requirements for both the importer and exporter, trade practices, merchandising techniques, service facilities in the various countries, and technical consideration such as commercial languages, and available electric current type and voltage are all treated in detail.

This report is available without charge from all Department of Commerce Field Offices or may be requested directly from the Africa Division, BIC-884, U.S. Department of Commerce, Washington, D.C. 20230, telephone: (202) 967-2436.

Calendar For World Traders

Mar. 9—Chicago—Overseas Automotive Club international meeting and reception, Boulevard Room, Sheraton-Chicago Hotel, 3-6:30 p.m.

Mar. 9—Kansas City—Meeting on air cargo for exporters, Top-Of-The-Tower Restaurant, Commerce Tower.

Mar. 10—New York—Dinner meeting of FCIB Publishers Export Credit Group, Advertising Club, 4 p.m.

Mar. 10—Philadelphia—Workshop on export credit and marine insurance, Commerce Field Office, 10 a.m.

Mar. 10—Seattle—Export seminar on marketing and forwarding, Commerce Field Office, 10 a.m.

Mar. 11 — Birmingham — International business forum on "Go Global" program, sponsored by U. of Alabama's Graduate School of Business, Parliament House Motor Hotel.

Mar. 11—Boston—Trade Winds roundtable seminar, 4 p.m., and dinner meeting, 5:30 p.m. Sponsor: Commerce Field Office.

Mar. 11—Chicago—Overseas Automotive Club's annual reception and banquet, Sheraton-Chicago Hotel, 6:30-11:30 p.m.

Mar. 11—Phoenix—Export workshop, Commerce Field Office, 10 a.m.

Mar. 16—Pittsburgh—World Trade Council luncheon, William Penn Hotel, noon.

Mar. 16—Providence—Rhode Island World Trade Conference, Biltmore Hotel, 2:30-9 p.m.

Mar. 16-17—Ann Arbor, Mich.—Seminar on Doing Business in Eastern Europe, Campus Inn. Sponsor: Institute for International Commerce, Graduate School of Business Administration, U. of Michigan.

Mar. 17—Boston—Workshop on Trade Center and Trade Fair Participation, Commerce Field Office, 9:30-11:30 a.m.

Mar. 17—New York—AMA luncheon on U.S. Trade Relations With Japan.

Mar. 17—San Diego—Spring meeting of the International Committee of the Aerospace Industries Assn. of America.

Mar. 17—Seattle—Export seminar on banking and insurance, Commerce Field Office, 10 a.m.

Mar. 18—New York—Luncheon meeting of FCIB Chemical and Food Export Club, Advertising Club, 12:15.

Mar. 23—Boston—Workshop on export documentation and proposals, Commerce Field Office, 9:30-11:30 a.m.

Mar. 23—Emporia, Kan.—Seminars on export development (9:30 a.m.) and export documentation (2 p.m.), Chamber of Commerce.

Mar. 24—Newton, Mass.—Overseas marketing workshop, Marriott Motor Hotel, 9 a.m.-4:30 p.m.

Mar. 24—Seattle—Export seminar on marketing and forwarding, Commerce Field Office, 10 a.m.

New Publications

When ordering any publication, indicate title and series designation, if indicated, and make checks or money orders payable to the Superintendent of Documents. Orders should be sent to the U.S. Department of Commerce, Washington, D.C. 20230, or to any of its field offices.

OFFICE OF THE SECRETARY

NATIONAL INDUSTRIAL POLLUTION CONTROL COUNCIL

The following Sub-Council Reports are available:

Acid mine drainage. 17pp. 20¢.

Animal slaughtering and processing. 18pp. 20¢.

Deep ocean dumping of baled refuse. 19pp. 20¢.

Exhaust emissions from gas turbine aircraft engines. 32pp. 30¢.

Glass containers. 25pp. 25¢.

Mathematical models for air pollution control policy decision-making. 26pp. 30¢.

Noise from gas turbine aircraft engines. 28pp. 30¢.

Regionally-consolidated industrial wastewater treatment. 38pp. 30¢.

Self-analysis of pollution problems. 50pp. 30¢.

Waste disposal in deep wells. 24pp. 25¢.

Wood products. 27pp. 25¢.

These Staff Reports are available:

Animal wastes. 19pp. 20¢.

Air pollution by sulfur oxides. 28pp. 20¢.

DOMESTIC AND INTERNATIONAL BUSINESS

BUREAU OF DOMESTIC COMMERCE

Construction review. December 1970. Monthly industry report. Vol. 16, No. 12. Annual subscription $6.50 ($1.75 additional for foreign mailing). Single copy, 55¢. Annual statistical issue—monthly data, 1965-70.

Marketing information guide. A monthly annotated bibliography. February. Vol. 18, No. 2. Annual subscription $4.50 ($1.25 additional for foreign mailing). Single copy, 40¢.

BUREAU OF INTERNATIONAL COMMERCE

Foreign Economic Trends

Annual subscription $15 ($6 additional for foreign mailing). Single copy 10¢. Latest reports include:

Argentina (ET 70-144). 12pp.

British Honduras (ET 71-002). 8pp.

Nicaragua (ET 71-003). 12pp.

International Marketing Information Service

Exhibitor's Export Market Guides

U.K. demand for U.S.-made separation systems equipment is on upward trend (IMIS 70-70). 8pp. 10¢.

Computer input/output devices shows to attract leading Japanese buyers (IMIS 71-002). 4pp. 10¢.

Overseas Business Reports

Annual subscription $16 ($5 additional for foreign mailing). Single copy 15¢. Latest reports include:

Basic data on the economy of Ceylon (OBR 70-76). Supersedes OBR 66-87. 12pp.

World trade outlook for Near East and South Asia (OBR 70-78). 16pp.

World trade outlook for Latin America & Caribbean (OBR 70-80). 12pp.

World trade outlook for Africa (OBR 70-81). 12pp.

World trade outlook for Eastern Europe (OBR 70-82). 8pp.

World trade outlook for the Far East (OBR 70-83). 16pp.

Establishing a business in the Dominican Republic (OBR 70-92). 10pp.

Trade Lists

Listings of foreign business firms, classified under approximately 75 commodity and service groups, are used in locating sales outlets, sources of supply, direct market survey, and similar uses. The following is newly compiled; others are available. $1 each.

American firms, subsidiaries and affiliates—Greece

ECONOMIC AFFAIRS

Readings in concepts and methods of national income statistics (PB 194 900). 290pp. $3 in paper copy (microfiche 95¢). Contains previously out-of-print materials dealing with the concepts and methods used in preparing the national income statistics. Order from National Technical Information Service, see address below.

Survey of Current Business. January. Vol. 51, No. 1. Annual subscription, including weekly supplements $9 ($3.75 extra for foreign mailing). Single copy $1.

BUREAU OF THE CENSUS

Agriculture

Report on cotton ginnings prior to Jan. 16, for the crop of 1970, by counties. (A20: 70-5). 8pp. 10¢.

Construction and Housing

Residential alterations and repairs—third quarter 1970 (C50-70-Q3). Annual subscription including two-part annual report $1.50. Single copy 25¢.

Housing completions: October 1970 (C22-70-10). Joint report released by Bureau of the Census and U.S. Department of Housing and Urban Development. Annual subscription $1. Single copy 10¢.

Vacant housing units in the United States: fourth quarter 1970 (Series H-111, No. 63). Annual subscription (Series H-111 and H-121, combined), $1.50 (50¢ more for foreign mailing). Per copy 20¢.

1970 Census of Housing

General Housing Characteristics—Advance Reports:

Alaska (HC(V1)-3). 8pp. 30¢.

Arizona (HC(V1)-4). 8pp. 30¢.

Colorado (HC(V1)-7. 16pp. 30¢.

Indiana (HC(V1)-16). 20pp. 30¢.

Iowa (HC(V1)-17). 20pp. 30¢.

Kansas (HC(V1)-18). 20pp. 30¢.

Kentucky (HC(V1)-19). 20pp. 30¢.

Missouri (HC(V1)-27). 24pp. 30¢.

Oklahoma (HC(V1)-38). 16pp. 30¢

Oregon (HC(V1)-39). 12pp. 30¢

Rhode Island (HC(V1)-41). 8pp. 30¢.

South Carolina (HC(V1)-42). 12pp. 30¢.

West Virginia (HC(V1)-50). 12 pp. 30¢.

Wisconsin (HC(V1)-51). 18pp. 30¢.

1967 Census of Construction Industries

Data has been revised in the following reports:

U.S. summary, Part A—statistics for all construction establishments—CC67-1-1A.

U.S. summary, part B—statistics for construction establishments with payroll—CC67-1-1B.

General building contractors—CC67-1-2.

Highway and street construction contractors—CC67-1-3.

Heavy construction, except highway and street construction, contractors—CC67-1-4.

Electrical work—special trade contractors—CC67-1-7.

Ornamental metal work special trade contractors—CC67-1-17.

Special trade contractors not elsewhere classified—CC67-1-22.

Delaware (CC67-A-9).

Florida (CC67-A-11).

Massachusetts (CC67-A-23).

Mississippi (CC67-A-26).

Pennsylvania (CC67-A-40).

Distribution and Services

Weekly retail sales. Estimated sales of retail stores in the United States, week ending Feb. 6 (CB 71-307). 2pp. 10¢.

Weekly retail sales. Estimated sales of retail stores in the United States, week ending Feb. 13 (CB 71-308). 2pp. 10¢.

Monthly retail trade report: December 1970 (CB 71-312). 2pp.

Green coffee—inventories, imports, roastings: fourth quarter 1970 (BG41-70-4). Annual subscription $1.

Canned food report. Estimates of distributors and canners stocks—January (CB 71-313). 2pp.

1967 Census of Business

Change Sheets—Selected Services, Area Reports. The following reports contain a revision to the original report. Each report was issued last September.

Delaware (BC67-SA9). **District of Columbia** (BC67-SA10). **Indiana** (BC67-SA16). **Iowa** (BC67-SA17). **Kentucky** (BC67-SA19). **Louisiana** (BC67-SA20). **Michigan** (BC67-SA24). **New York**

(BC67-SA34). **Pennsylvania** (BC67-SA40). **South Carolina** (BC67-SA42). **Vermont** (BC67-SA47). **Virginia** (BC67-SA48). **Washington** (BC67-SA49). **Wisconsin** (BC67-SA51). **Wyoming** (BC67-SA52).

Foreign Trade

U.S. airborne foreign trade. Customs district by continent: December 1970 (FT 986). Annual subscription (FT900, 975, 985, and 986 combined) $3. Single copy 10¢.

U.S. exports—schedule B commodity and country: November 1970 (FT 410). Annual subscription $33 ($8.25 more for foreign mailing). Single copy $2.75.

U.S. imports—general and consumption, schedule A commodity and country: November 1970 (FT 135). Annual subscription $21 ($5.25 more for foreign mailing). Single copy $1.75.

Bunker oil and coal laden in the United States on vessels engaged in foreign trade: December 1970 (FT 810). Annual subscription $1. Single copy 10¢.

Trade area, coastal district, customs district, port of lading or unlading, and type of service: November 1970 (FT 985). Annual subscription (FT900, 975, 985, and 986 combined) $3. Single copy 10¢.

Geocoding with ADMATCH—a Los Angeles area experience. Report No. 14. 32pp. 25¢. A report describing the use of ADMATCH with a variety of local geographic base files such as ACG, DIME, and street tract indexes.

Technical notes 4. January 1971. 28 pp. 25¢. These notes present fragments from research investigations by Bureau of the Census staff members over the past few years. The individual notes are primarily methodological in nature and relate mainly to the design, analysis, and evaluation of various Bureau sample surveys and censuses.

Industry

Current Industrial Reports

Woven fabrics: inventories and unfilled orders seasonal adjustment supplement—1960 to 1969 (Series: M22A Supplement-2). 15¢ per copy, $1.50 per year.

Heating and cooking equipment: 1969 (Series: M34N(69)-13). 15¢ per copy, $1.50 per year.

Internal combustion engines: 1969 (Series: MA-35L(69)01). 25¢ per copy.

Selected instruments and related products: 1969 (Series: MA-38B(69)-1). 25¢ per copy.

Population

1970 Census of Population

General Population Characteristics—Advance Reports:

Minnesota (PC(V2)-25). 18pp. 30¢.
Oklahoma (PC(V2)-38). 16pp. 30¢.
Rhode Island (PC(V2)-41). 8pp. 30¢.
South Carolina (PC(V2)-42). 10pp. 30¢.
West Virginia (PC(V2)-50). 12pp. 30¢.
Wisconsin (PC(V2)-51). 17pp. 30¢.

Current Population Reports

Characteristics of American youth: 1970 (Series P-23, No. 34). 40pp. 45¢. This report presents data on the characteristics of persons 14 to 24 years old. Data are included on their numbers, racial composition, school enrollment, educational attainment, marital status, family composition, fertility, migration, voter participation, labor force status, occupation, and income

Consumer Buying Indicators. Recent purchases of cars, houses, and other durables and expectations to buy during the months ahead: Survey data through January (Series P-65, No. 35). 18pp. 20¢.

ECONOMIC DEVELOPMENT

Federal and State Indian Reservations. 434pp. $3.75. An EDA handbook containing basic information about Federal and State reservations throughout the United States. Where available, information on the culture, land status, history, government, population profile, tribal economy, climate, transportation, utilities and recreation for reservations is included.

Economic Development. Vol. 8, No. 2. Annual subscription $1 (50¢ additional for foreign mailing). Single copy 15¢.

SCIENCE AND TECHNOLOGY

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Instrumentation of small rockets for polar cap absorption studies (NOAA TR ERL 190-SDL 19). 34pp. 35¢. The instrumentation of small sounding rockets for scientific experiments in the region from 50 km. to approximately 110 km. is described.

Species densities in the lower thermosphere compatible with the U.S. standard atmosphere (NOAA TR ERL 193-SDL 20). 26pp. 30¢. (This is a revision of ESSA Technical Report ERL 184-SDL 17, which contained errors in the tables.) O_2, N_2, and O number density profiles have been constructed in the 80-120 km. region compatible with the U.S. Standard Atmosphere, 1962, and the U.S. Standard Atmosphere Supplements, 1966. Profiles have been constructed at 15, 30, 45, and 60°N, for winter, summer, and spring/fall.

High precision profiling with a rubidium magnetometer pair (NOAA TR ERL 192-ESL 14). 22pp. 30¢. This report discusses the limitations on profiling accuracy imposed by the intrinsic reproducibility of a rubidium horizontal gradiometer. It then describes a pier-differencing method of traversing which has been used to overcome this problem.

Preliminary determination of epicenters. Monthly listings, October 1970. 8pp. Annual subscription $1.50 (50¢ more for foreign mailing). Single copy 15¢. These reports list the approximate locations of earthquakes anywhere in the world, with origin time, latitude, longitude, region of occurrence, depth, magnitude, and when available, comments on damage and casualties and miscellaneous information.

Collected reprints — 1969. Volume 1. 630pp. $4.25. Contains the published results of the scientific and technical work of ESSA's Atlantic Oceanographic and Meteorological Laboratories and Pacific Oceanographic Laboratories for the year 1969.

NATIONAL BUREAU OF STANDARDS

Technical News Bulletin. Vol. 55, No. 2. Annual subscription $3 ($1 more for foreign mailing). Single copy 30¢.

Unified theory calculations of Stark broadened hydrogen lines, including lower state interactions (NBS Monogr. 120). 45pp. 50¢. Recently published calculations of hydrogen Stark broadening on the basis of the unified classical path theory have been extended to include lower state interactions in the final line profile. A detailed comparison with experiments in the density range 10^{13}–10^{17}–cm-$^{-3}$ is given.

Design for a variable-output-coupling far-infrared Michelson laser (Tech. Note 395). 23pp. 50¢. A technique for varying the coupling of power from far-infrared gas lasers and the design and construction of these lasers are described. The coupling method is based on Michelson's interferometric principle and permits a continuously variable coupling of the available power from the laser.

Analysis of interlaboratory measurements on the vapor pressures of cadmium and silver. (Spec. Publ. 260-21). 30pp. 35¢. Detailed statistical analyses of results obtained from a series of interlaboratory measurements on the vapor pressures of cadmium and silver.

NBS technical highlights—1970 (Spec. Publ. 340). 258pp. $1.50.

NATIONAL TECHNICAL INFORMATION SERVICE

Order the following reports on Government-sponsored research from: National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151. Make check or money order payable to National Technical Information Service. Price for each document is $3 (microfiche 95¢) unless otherwise specified.

Operations of the National Weather Service (COM-71-00140). National Oceanic and Atmospheric Administration's National Weather Service. 223pp. Discusses operations and activities of the National Weather Service, including meteorological forecasts and services, hydrologic forecasts and service, data acquisition, communications, space operations support, overseas operations, research and development, engineering services, and education and training.

The noise around us: including technical backup (COM-71-00147). Paper copy $6 (microfiche 95 cents), 302pp. Exposure of people to noise, the technology which is available to control noise, and the legal and economic aspects of noise control have been studied by the Commerce Technical Advisory Board panel on noise abatement. Technical backup presented in the Panel's report includes extensive discussions of the causes and effects of noise pollution and of the technical, legal, and economic aspects of noise abatement and control.

Publications of the economics department, 1963-70 (AD-716 893). Rand Corp., Santa Monica, Calif., 81pp. Annotated listing of unclassified publications issued by the Rand Economics Department between Jan. 1, 1963 and June 30, 1970.

An econometric model of the copper industry (PB-196 529). Charles River Associates, Inc., Cambridge, Mass., for GSA, 100pp.

Electronic product inventory study (PB-195 968). Bureau of Radiological Health, Rockville, Md., 82pp. Studies current and predicted national inventories of electronic products that may emit hazardous radiation. Report discusses market data for various types of products that emit ionizing or nonionizing radiation, evaluates growth trends, and estimates the future market for these products. Included are market data for electronic components, partial listings of electronic product and component manufacturers, and associations and groups related to various electronic products.

☆ U. S. GOVERNMENT PRINTING OFFICE 1971—J. 432-031/19

Commerce Department Directory

Commerce Building, 14th Street and Constitution Avenue, Washington, D.C. 20230, Phone STerling 3-9200

MAURICE H. STANS, Secretary of Commerce

Richard P. Whitney, Executive Assistant to the Secretary

Robert M. Smalley, Special Assistant to the Secretary

John H. Altorfer, Special Assistant to the Secretary

Joseph Casson, Assistant to the Secretary

ROCCO C. SICILIANO, Under Secretary of Commerce

Hudson B. Drake, Deputy Under Secretary

ROBERT M. WHITE, Administrator for the National Oceanic and Atmospheric Administration

STAFF UNITS REPORTING TO THE SECRETARY

Sol Mosher, Special Assistant for Congressional Relations

Steven E. Schanes, Special Assistant for Policy Development

George J. Pantos, Special Assistant for Regional Economic Coordination

B. R. Littin, Director of Public Affairs

ASSISTANT SECRETARIES

ROBERT McLELLAN, Assistant Secretary for Domestic and International Business

ROBERT A. PODESTA, Assistant Secretary for Economic Development

LARRY A. JOBE, Assistant Secretary for Administration

HAROLD C. PASSER, Assistant Secretary for Economic Affairs

ANDREW E. GIBSON, Assistant Secretary for Maritime Affairs

C. LANGHORNE WASHBURN, Assistant Secretary for Tourism

J. H. WAKELIN, JR, Assistant Secretary for Science and Technology

GENERAL COUNSEL

JAMES T. LYNN, General Counsel

William E. Murane, Deputy General Counsel

FIELD OFFICES

ALBUQUERQUE, N.MEX., 87101, U.S. Courthouse. Area Code 505, 843-2386.

ANCHORAGE, ALASKA, 99501, 412 Hill Bldg., 632 Sixth Ave. Area Code 907, 272-6531.

ATLANTA, GA. 30303, Room 400, 75 Forsyth St., NW. Area Code 404, 526-6000.

BALTIMORE, MD., 21202, 305 U.S. Customhouse, Gay and Lombard Sts. Area Code 301, 962-3560.

BIRMINGHAM, ALA., 35205, Suite 200-201, 908 S. 20th St. Area Code 205, 325-3327.

BOSTON, MASS., 02203, Room 510, John Fitzgerald Kennedy Federal Bldg. Area Code 617, 223-2312.

BUFFALO, N.Y., 14203, 504 Federal Bldg., 117 Ellicott St. Area Code 716, 842-3208.

CHARLESTON, S.C., 29403, Federal Bldg., Suite 631, 334 Meeting St. Area Code 803, 577-4171.

CHARLESTON, W.VA., 25301, 3000 New Federal Office Bldg., 500 Quarrier St. Area Code 304, 343-6181 Ext. 375 and 376.

CHEYENNE, WYO., 82001, 6022 O'Mahoney Federal Center, 2120 Capitol Ave. Area Code 307, 778-2220 Ext. 2151.

CHICAGO, ILL., 60604, 1486 New Federal Bldg., 219 S. Dearborn St. Area Code 312, 353-4400.

CINCINNATI, OHIO, 45202, 8028 Federal Office Bldg., 550 Main St. Area Code 513, 684-2944.

CLEVELAND, OHIO, 44114, Room 600, 666 Euclid Ave. Area Code 216, 522-4750.

DALLAS, TEX., 75202, Room 1200, 1114 Commerce St. Area Code 214, 749-3287.

DENVER, COLO., 80202, Room 161 New Customhouse, 19th and Stout Sts. Area Code 303, 837-3246.

DES MOINES, IOWA, 50309, 609 Federal Bldg., 210 Walnut St. Area Code 515, 284-4222.

DETROIT, MICH., 48226, 445 Federal Bldg. Area Code 313, 226-6088.

GREENSBORO, N.C., 27402, 258 Federal Bldg., W. Market St. P.O. Box 1950. Area Code 919, 275-9111.

HARTFORD, CONN. 06103, Room 610-B, Federal Office Bldg., 450 Main St. Area Code 203, 244-3530.

HONOLULU, HAWAII, 96813, 286 Alexander Young Bldg., 1015 Bishop St. Area Code 808, 546-5977.

HOUSTON, TEX., 77002, 1017 Old Federal Bldg., 201 Fannin St. Area Code 713, 226-4231

JACKSONVILLE, FLA., 32202, P.O. Box 35087, 400 W. Bay St. Area Code 904, 791-2796.

KANSAS CITY, MO., 64106, Room 1840, 601 E. 12th St. Area Code 816, 374-3141.

LOS ANGELES, CALIF., 90024 11201 Federal Bldg., 11000 Wilshire Blvd. Area Code 213, 824-7591.

MEMPHIS, TENN., 38103, 710 First American Bank Bldg., 147 Jefferson Ave. Area Code 901, 534-3214.

MIAMI, FLA., 33130, Rm. 821, City National Bank Bldg., 25 W. Flagler St. Area Code 305, 350-5267.

MILWAUKEE, WIS., 53203, Straus Bldg., 238 W. Wisconsin Ave. Area Code 414, 224-3473.

MINNEAPOLIS, MINN., 55401, 306 Federal Bldg., 110 S. Fourth St. Area Code 612, 725-2133.

NEW ORLEANS, LA., 70130, 909 Federal Office Bldg., S., 610 South St. Area Code 504, 527-6546.

NEW YORK, N.Y., 10007, 41st Floor, Federal Office Bldg., 26 Federal Plaza, Foley Sq. Area Code 212, 264-0634.

PHILADELPHIA, PA., 19107, Jefferson Bldg., 1015 Chestnut St. Area Code 215, 597-2850.

PHOENIX, ARIZ., 85025, 5413 New Federal Bldg., 230 N. First Ave. Area Code 602, 261-3285.

PITTSBURGH, PA., 15222, 431 Federal Bldg., 1000 Liberty Ave. Area Code 412, 644-2850.

PORTLAND, ORE., 97204, 217 Old U.S. Courthouse, 520 S.W. Morrison St. Area Code 503, 226-3361.

RENO, NEV., 89502, 2028 Federal Bldg., 300 Booth St. Area Code 702, 784-5203.

RICHMOND, VA., 23240, 2105 Federal Bldg., 400 N. 8th St., Area Code 703, 772-2246.

ST. LOUIS, MO., 63103, 2511 Federal Bldg., 1520 Market St. Area Code 314, 622-4243.

SALT LAKE CITY, UTAH, 84111, 1201 Federal Bldg., 125 S. State St. Area Code 801, 524-5116.

SAN FRANCISCO, CALIF., 94102, Federal Bldg., Box 36013, 450 Golden Gate Ave. Area Code 415, 556-5864.

SAN JUAN, P.R., 00902, Room 100, Post Office Bldg. Phone 723-4640.

SAVANNAH, GA., 31402, 235 U.S. Courthouse and Post Office Bldg., 125-29 Bull St. Area Code 912, 232-4321.

SEATTLE, WASH., 98104, 8021 Federal Office Bldg., 909 First Ave. Area Code 206, 583-5615.

UNITED STATES
GOVERNMENT PRINTING
DIVISION OF PUBLIC DOCU
WASHINGTON, D.C. 204

OFFICIAL BUSINESS

CR - MAY 46129
UNIVERSITY MICROFILMS
SERIALS SECTION
300 NORTH ZEEB RD 48106
ANN ARBOR MICH

POSTAGE AND FEES PAID
U.S. GOVERNMENT PRINTING OFFICE

McCHORD AFB
WASHINGTON
MILITARY

Here are ten qualities these men offer you as an employer...

- **Skill**
- **Discipline**
- **Ambition**
- **Motivation**
- **Maturity**
- **Experience**
- **Confidence**
- **Youth**
- **Proven ability**

- **And they are Vietnam Veterans**

Over one million talented servicemen will enter the civilian job market this year. You can take advantage of this premium manpower pool by seeking out veterans for current job openings. And by participating in Government-financed programs to train veterans for skills you want.

Write **NOW** for detailed information

Jobs For Veterans
Charles Daly
1400 Wilson Blvd.
Arlington, Va. 22209
Telephone: AC202 OX-41685

Or, call or visit your local State Employment Service